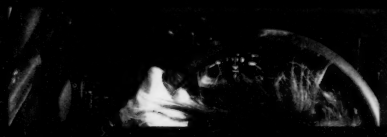

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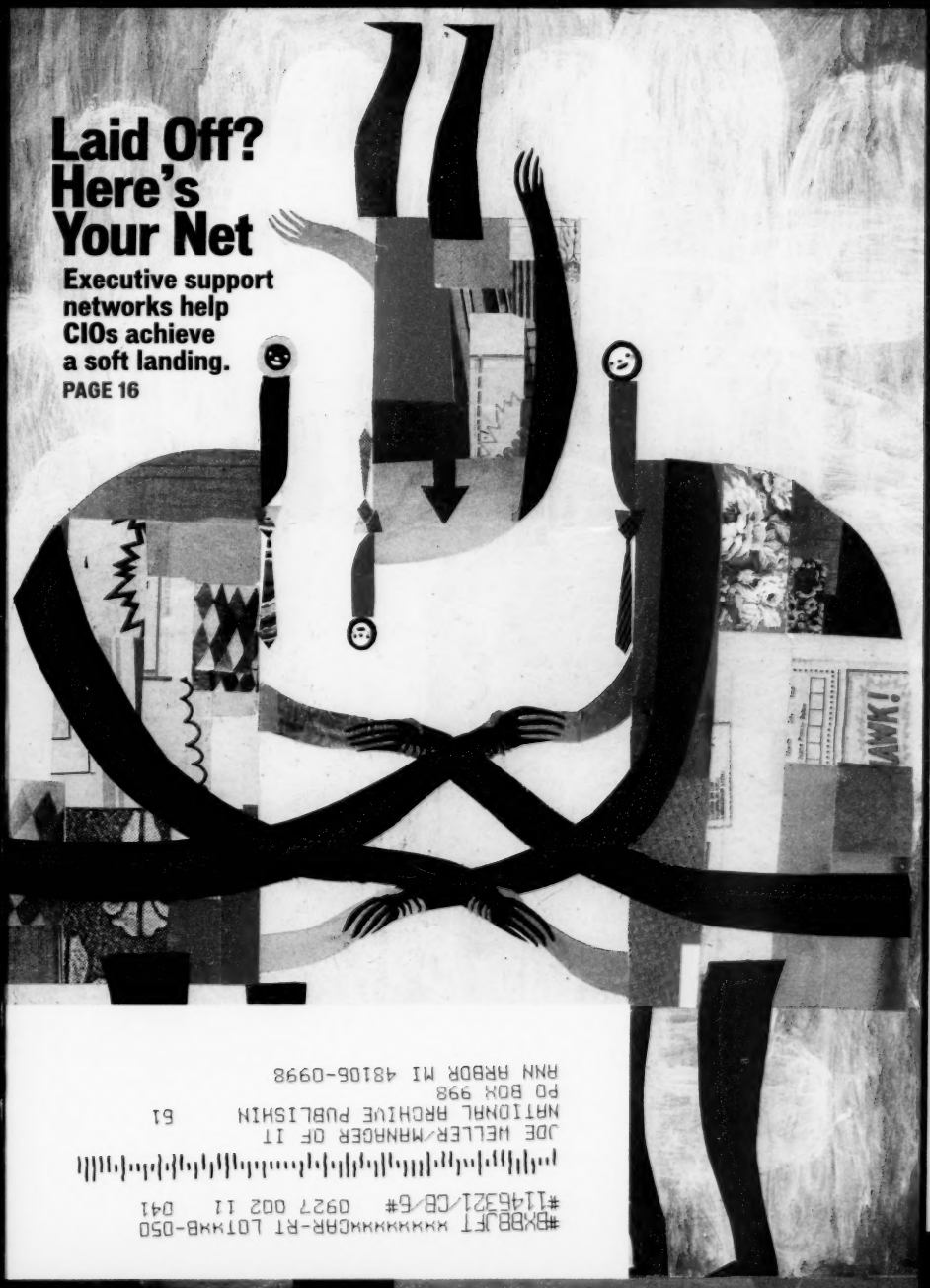

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AUGUST 17/24, 2009
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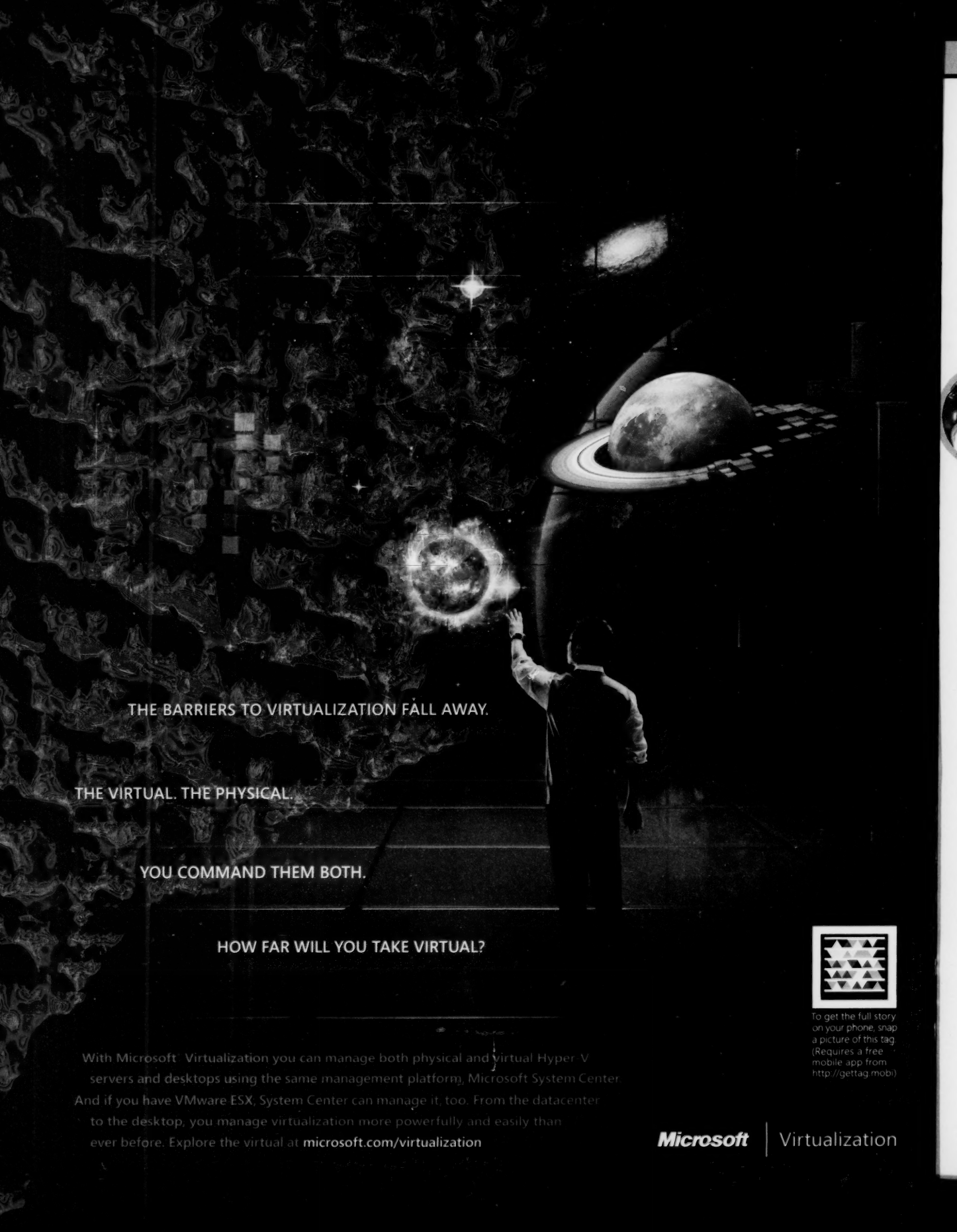
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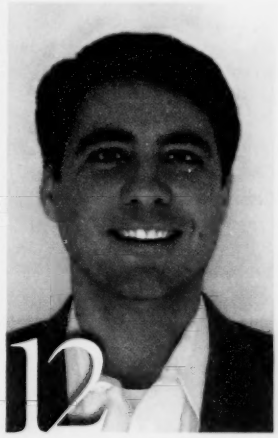

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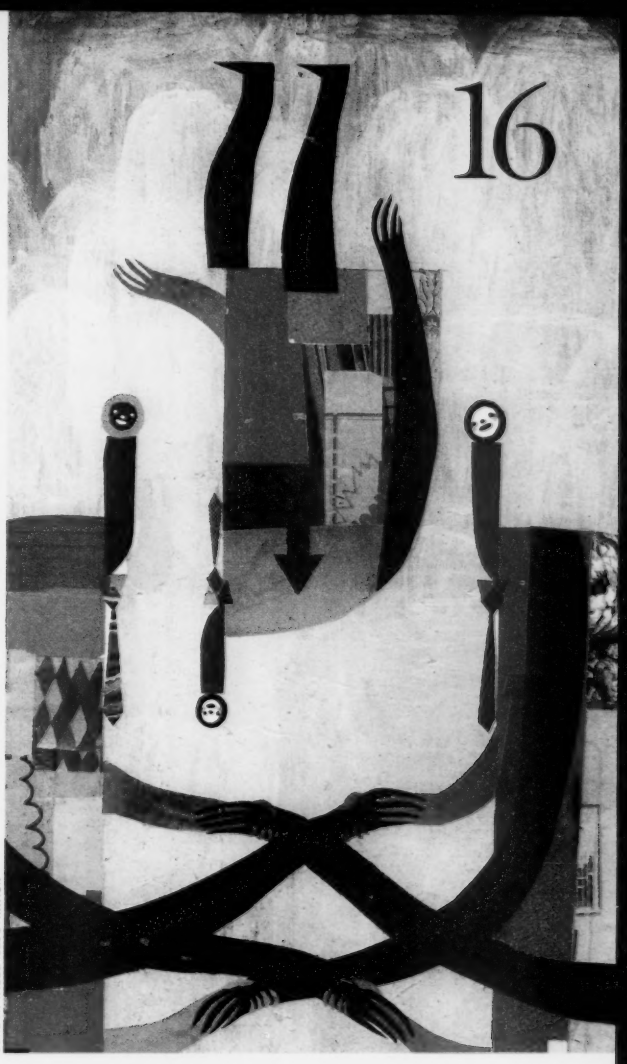

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ONLINE CHATTER

RESPONSES TO:

Tech Grad Who Can't Find Job Sues to Get Tuition Back

Aug. 3, 2009

Something is wrong when you work your butt off and pay $70k and can't find a job. I question the entire system. I say boycott all 4-year colleges. Employers can train on the job.
Submitted by: *Anonymous*

Sure, go ahead and boycott secondary education, and make my bachelor's degree just that much more valuable in a tight labor market.
Submitted by: *Anonymous*

You pay $70k for the education, not a job guarantee.

The thing that is wrong is that the economy crashed and no one is hiring. Companies are either having layoffs or have hiring freezes.
Submitted by: *Meh*

What university does not have career counseling and job placement services? It's part of their marketing. If the student has good grades and can't find a job, then the school is guilty of false advertising. She's due a partial refund, at least.
Submitted by: *Anonymous*

Why would anyone hire Ms. Thompson now? If she doesn't get a promotion, will she sue her employer? She didn't really help herself out. Maybe she should sue herself.
Submitted by: *Anonymous*

Why is it the responsibility of the school to find a job for the student, assuming it made no promises?

While "career services" were helpful, I found my first job out of college (and after graduate school) on my own through the normal means. I used job sites, sent out résumés (paper and electronic) and networked.
Submitted by: *Anonymous*

This situation is one of the many reasons why we in my family believe that every teen should work in the retail trade in high school. It teaches you not to be so entitled.
Submitted by: *Anonymous*

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Windows 7: A Closer Look

Now that Windows RTM is in the can, what's the final verdict? Should you upgrade?

Going High-End With Hardware For Windows 7...

The time is right to start putting together a system that will make Windows 7 shine – without breaking the bank.

... And Pushing the Limits of the Low End

We found Windows 7 running on systems that didn't come close to meeting Microsoft's minimum hardware requirements. Among them: an underpowered netbook and a seven-year-old "white box" PC.

Desktop Multiprocessing: Not So Fast

Not every application can be reprogrammed for multicore architectures, and some bottlenecks will always remain. Here's why.

Four 'Large' Netbooks

REVIEW: Are they better, or just bigger? And are they too big to be called netbooks?

Back-to-School Gadgets

A look at the IT gear that the well-appointed college student will be carrying this year.

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News Digest

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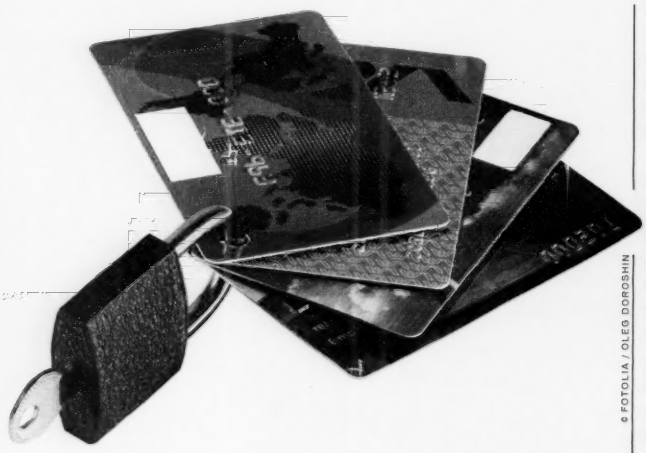
THE WEEK AHEAD

MONDAY: The 2009 Air Force Information Technology Conference, hosted by the 754th Electronic Systems Group, opens today in Montgomery, Ala. About 6,000 attendees are expected at the event, which continues through Thursday.

THURSDAY: Dell is slated to announce financial results for the second quarter of its 2010 fiscal year. Novell is scheduled to announce its 2009 third-quarter results.



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SECURITY

U.S. Says SQL Injection Caused Major Breaches

A GROUP OF hackers used SQL injection techniques to steal huge amounts of data from Heartland Payment Systems Inc., TJX Companies Inc. and other businesses, according to court papers filed in connection with last week's indictment of the group's alleged ringleader.

A federal grand jury in New Jersey indicted Albert Gonzalez and two unidentified accomplices on charges related to the theft of 130 million credit and debit card numbers from Heartland, Hannaford Bros. Co., 7-Eleven Inc. and three other retailers not identified by prosecutors.

Gonzalez had been indicted earlier by grand juries in Massachusetts and New York on charges related to thefts of data from several other retailers, including TJX, Dave & Buster's Holdings, BJ's Wholesale Club, OfficeMax, Barnes & Noble and The Sports Authority.

The U.S. alleges that the criminal group used SQL injection techniques to exploit poorly coded Web application software. Once they gained access to a corporate system, the hackers planted sophisticated packet-sniffing tools and other malware to detect and steal payment card data flowing over the victim companies' networks, according to court documents.

SQL injection attacks take advantage of a vulnerability that appears when a Web application fails to properly filter or validate data a user enters on a Web page to order a product or communicate with a company. An attacker can send a malformed SQL query to the underlying database to break into it, plant malicious code or access other systems.

"We see SQL injection as the top attack technique on the Web," said Michael Petitti, chief marketing officer at Trustwave, a security firm whose clients include Heartland.

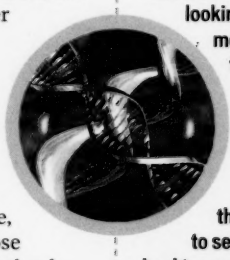
Launching such attacks "doesn't require much expertise at all," said Chris Wysopal, chief technology officer at Veracode Inc., a provider of security services. "It is at the script-kiddie level to do these kinds of attacks."

He added that companies using older versions of Microsoft's SQL Server database are especially vulnerable to SQL injection attacks.

— Jaikumar Vijayan, with Sharon Gaudin

HARDWARE

IBM Using DNA in New Chips



Researchers at IBM are experimenting with a combination of DNA molecules and nanotechnology to create tiny circuits that could form the basis of smaller, more powerful and energy-efficient computer chips that also are easier and cheaper to manufacture. IBM said last week that it's looking to use the DNA molecules as scaffolding so carbon nanotubes can assemble themselves into precise patterns. The ability for the DNA structures to self-assemble would lead to greater precision in the design and manufacture of chips, said Greg Wallraff, an IBM Research scientist working on the project. He noted that implementation is still years away.

Dan Olds, an analyst at Gabriel Consulting Group Inc., said that "harnessing biological processes and building blocks" could significantly cut chip-building costs.

– SHARON GAUDIN, WITH AGAM SHAH OF THE IDG NEWS SERVICE

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REGULATION

Mozilla Asks EU to Reject Microsoft Windows 7 Plan

MOZILLA Foundation officials last week launched a concerted campaign to prod European Union antitrust regulators to demand more from Microsoft Corp. than the browser "ballot screen" the company has promised to offer Windows 7 users later this year.

Microsoft told EU antitrust officers on July 24 that to ease their concerns about its market dominance, it would provide European users a choice of Web browsers with its upcoming Windows 7 operating system.

Mitchell Baker, the former CEO and current chairwoman of the Mozilla Foundation, and Harvey Anderson, Mozilla's chief counsel, last week wrote lengthy blog posts citing their concerns about the Microsoft proposal and spelling out the changes they want to see in Windows 7.

John Lilly, Mozilla's current CEO, called the blog posts "part of our effort to get across our point of view. In principle, [Microsoft's proposal] sounds good, but in practice, the way they implement it will make a big difference."

In one of last week's posts, Baker argued that even if the plan were accepted, IE would enjoy most-favored-browser status. "Even if everything in the currently proposed settlement is implemented in the most positive way, IE will still have a unique and uniquely privileged position on Windows installations," she said.

Anderson said that his concerns about the plan include IE's continued ties with other Microsoft software, particularly Office, and the unfair advantage IE would maintain because the other browsers must be downloaded.

Mozilla is also calling on Microsoft to extend its plans for EU countries to users around the world.

EU regulators have not set a timetable for a final decision on Microsoft's proposal, but sources close to Microsoft have said they expect a resolution before the end of October.

— *Gregg Keizer*

BETWEEN THE LINES

By John Klossner

IF THE INJUNCTION AGAINST THE SALE of WORD ISN'T LIFTED, BUSINESSES WILL FAIL, COMMUNICATION AS WE KNOW IT WILL END, MILLIONS of PEOPLE WILL BE OUT ON THE STREETS, AND A PLAGUE of FROGS WILL DESCEND UPON THE LAND.
BUT WE'RE NOT A MONOPOLY.

BENCHMARKS LAST WEEK

NetApp Inc. named Tom Georgens to succeed Dan Warmenhoven as CEO. Georgens, 49, has been president and chief operating officer and will retain the presidency.

The U.S. Department of Justice approved Oracle Corp.'s $7.4 billion acquisition of Sun Microsystems Inc. The deal still needs to be approved by European regulators.

54 YEARS AGO: The first computer user group, Share, was founded by users of IBM's large-scale Model 704 Data Processing System computer.

Global Dispatches

China Looks to Cut Lenovo Stake

BEIJING – The Chinese Academy of Sciences, a state-run research institute, announced earlier this month that it is looking to sell part of its 65% stake in Legend Holdings Ltd., the parent company of Lenovo Group Ltd., for 2.76 billion yuan ($404 million U.S.).

The planned sale of a 29% stake would reduce the academy's holdings in the PC maker to 35%, according to a spokesman. The government is seeking a buyer with expertise in capital management and marketing, he added.

The buyer must agree not to resell its stake, alter Legend's strategy or propose changes to the company's executive base for five years, the academy said in a statement.

Lenovo declined to comment.

Owen Fletcher,
IDG News Service

HP's Mphasis to Buy AIG Services Unit

BANGALORE, India – Hewlett-Packard Co.'s Mphasis services subsidiary this month agreed to acquire AIG Systems Solutions Ltd., the Indian IT services arm of New York-based insurer American International Group Inc., for an undisclosed sum.

The AIG unit employs 800 people in Chennai and Kolkata and provides IT services to AIG units worldwide.

Ganesh Ayyar, CEO of Bangalore-based Mphasis, said the acquisition should boost his firm's presence and expertise in the insurance and financial services markets.

John Ribeiro,
IDG News Service

BRIEFLY NOTED

Amity University in Noida, India, last week announced plans to offer online IT degree programs to 100,000 students on the African continent over the next five years. The $116 million (U.S.) program to train students in 53 countries is being funded by the government of India. The country hopes the investment will help boost Indian sales of telecommunications gear in Africa.

Edris Kisambira,
Computerworld Uganda

DESKTOP APPLICATIONS

Microsoft Warns of Chaos If Word Sales Are Halted

MICROSOFT CORP. warned last week that an injunction preventing it from selling Word in the U.S. after Oct. 10 would cause "massive disruptions" to sales of its Office software, as well as to key partners like Best Buy Co., Dell Inc. and Hewlett-Packard Co.

A week earlier, U.S. District Court Judge Leonard Davis had issued the injunction and ordered that Microsoft pay $290 million in damages and interest to Toronto-based i4i Inc. for infringing on that company's patent for a document system that uses XML custom formatting.

The i4i technology allows users of Word 2003, Word 2007 and Word for Mac 2008 to create custom XML documents.

In its emergency motion filed Aug. 18 with the U.S. Court of Appeals, Microsoft warned of the business disruption and asked that the injunction be stayed during the appeal.

"Even if Microsoft ultimately succeeds on appeal, it will never be able to recoup the funds expended in redesigning and redistributing Word, the sales lost during the period when Word and Office are barred from the market, and the diminished goodwill from Microsoft's many retail and industrial customers," Microsoft argued.

The company also said that an injunction would "inflict irreparable harm on Microsoft by potentially keeping the centerpiece of its product line (Office) out of the market for months."

Barry Negrin, a partner at New York law firm Pryor Cashman LLP who has practiced patent and trademark law for 17 years, said that Davis' conclusion that Microsoft willfully infringed on the i4i patent will probably hurt the company's chances for an injunction.

In a 65-page summary opinion, Davis said that Microsoft knew of the patent held by i4i as early as 2001 but nevertheless set out to make the Canadian developer's software "obsolete" by adding a custom XML feature to Word.

Negrin also contended that Microsoft could use an "easy technical workaround" to sidestep the injunction.

"All Microsoft has to do is disable the custom XML feature, which should be pretty easy to do, then give that a different SKU number from what's been sold, so it's easy to distinguish the two versions," he said.

Microsoft requested that the court order i4i to respond to its motion by Aug. 24, and it promised to reply to any i4i response by Aug. 28.

— *Gregg Keizer*

Short Takes

Oracle Corp. plans to release a long-awaited update to its flagship database in September, according to a source. It has been keeping information about the new database version, dubbed 11g R2, under wraps, swearing beta testers to secrecy.

Microsoft Corp. has released technology previews of SQL Azure, the database for its Azure cloud infrastructure technology, and SQL Server StreamInsight, its first complex event-processing tool. SQL Azure is slated to ship in November, and SQL Server StreamInsight is due next year.

Lenovo Group Ltd. warned users that certain batteries sold with its ThinkPad laptops may be permanently damaged. It offered to replace batteries that do not recharge or cannot be repaired.

Apple Inc. has plugged six security holes, four of them "critical," in the Macintosh and Windows versions of its Safari browser.

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■ NEW ANALYSIS

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Cutbacks Could Be Causing IT Outages

Analysts say budget and job cuts could be to blame for a spike in service disruptions.

By Patrick Thibodeau

WHEN eBay Inc.'s PayPal unit suffered a worldwide outage early this month, Sailrite Enterprises Inc., a sailing supply company based in Churubusco, Ind., lost its critical customer payment services for six hours.

The next day, Aug. 4, PayPal's services failed Sailrite again — this time for about an hour, according to Matt Grant, a vice president at Sailrite. Grant was not amused. He posted a blunt message on PayPal's blog site: "This is not acceptable."

In an e-mail, San Jose-based PayPal blamed the outage on a problem with a "back-end router" that was complicated by a failure in the company's redundancy measures.

The PayPal electronic payment system is one of many Internet-based services that have been hit with outages. And based on news reports, the number of such incidents appears to have been increasing in recent months, analysts said. They cited shutdowns of the Google Apps software hosted by Google Inc., outages at data centers run by Rackspace Hosting Inc. and a distributed denial-of-service attack on Twitter.

Observers pointed to several possible reasons for the apparent uptick in online outages, including IT budget and personnel cutbacks, increasing corporate dependence on hosted applications — and bad luck.

Kurt Roemer, chief security strategist at Citrix Systems Inc. in Fort Lauderdale, Fla., said he wonders whether a two-hour shutdown of Cisco Systems Inc.'s Web site this month "would [have] happened a few years ago . . . when they had multiple people checking every single change." Cisco blamed the outage on human error.

IT staff cuts spurred by the economy are likely to continue throughout the remainder of the year. According to a survey of 300 IT center managers last year by the Association for Computer Operations Management, half of all data centers were planning to cut 2009 budgets by an average of 15%. Respondents at 14% of those companies said the cuts would include layoffs of IT staffers.

Ken Brill, executive director of Uptime Institute Inc., a data center engineering and consulting firm, said such budget and personnel cutbacks can prove disastrous to IT. "We're not doing the maintenance we should be doing, and when you don't do maintenance, you increase the probability of catastrophic failure," he said.

> **"We're not doing the maintenance we should be doing, and when you don't do maintenance, you increase the probability of catastrophic failure.**
> **KEN BRILL,** UPTIME INSTITUTE INC.

Brill added that energy-efficiency efforts may be prompting data centers to cut back on redundant equipment and run their systems harder, exposing equipment flaws.

Leslie Daigle, chief technology officer of the Internet Society standards group, said that the online service business will probably survive despite periodic outages. "The Internet is in a state of constant evolution, and that really does provide its overall resilience," she said.

And some IT managers say that recent outages aren't changing their minds about using hosted services.

For example, Ted Maulucci, CIO at real estate developer Tridel Corp. in Toronto, defended the durability of hosted data center systems, despite the fact that his provider had suffered an outage. "Five years ago, it was not uncommon to experience the odd interruption, whereas today it has been pretty rock-solid, other than the major failure that happened," he said.

Neal Puff, CIO for Yuma County, Ariz., agreed, even though the county moved its ERP system from a cloud-based provider back in-house last year. Puff said he still believes that "a well-run hosted solution with reliable connections will perform well and be as reliable as any well-run in-house system." ■

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The Cloud Could Be a Boon for Flash Storage

Web-based companies are hoping to use the technology to speed user access to hosted data. By Stephen Lawson

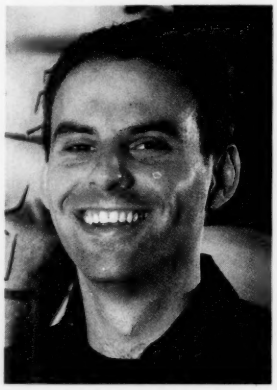
CLOUD COMPUTING and flash-based storage, two fast-emerging IT technologies, are driving each other forward as users of Internet-based services like social networks demand near-real-time access to ever-growing amounts of data.

Executives at Web-based companies like MySpace Inc. and Facebook Inc. are calling flash storage technologies vital to the future of businesses like theirs, which must deliver data to thousands of users simultaneously.

"In the last 20 years, spinning disk really hasn't gone any faster, and right now we're really on the cusp of a change with flash technologies," said Richard Buckingham, MySpace's vice president of technical operations, speaking at The GigaOM Network's Structure 09 conference in San Francisco earlier this summer.

At the same conference, Jonathan Heiliger, vice president of technical operations at Facebook, predicted that "flash is going to have a very, very significant effect on not just storage, but infrastructure as a whole. I think it's going to have at least as significant an impact as going from single-core to multicore CPUs."

Flash storage is faster than hard disk drives because it doesn't need to spin a disk to get to a particular bit of data. With flash technologies like solid-state disk drives (SSD) and PCI Express flash cards, it's possible to read data anywhere in a storage device in less than a millisecond, compared with several milliseconds on a traditional hard disk drive. SSD and flash storage systems also take up less space and use less power than spinning disks.



"Flash is going to have a very, very significant effect on not just storage, but infrastructure as a whole. I think it's going to have at least as significant an impact as going from single-core to multicore CPUs.

JONATHAN HEILIGER, VICE PRESIDENT, FACEBOOK INC.

The data centers of cloud-based companies are so big that all of those benefits really matter, said Andrew Reichman, an analyst at Forrester Research Inc.

Although corporate IT shops could also take advantage of the performance gains, the high cost of flash technology will likely continue to blunt its progress in enterprise IT, according to analysts. IDC estimates that SSD storage costs as much as 25 times more than spinning disks on a per-gigabyte basis, said Jeff Janukowicz, an analyst at the Framingham, Mass.-based IT research firm.

TRIPLE-DIGIT GROWTH

Nonetheless, the growing needs of large-scale Web-based companies for better performance, improved capacity utilization and lower power consumption will help drive up enterprise SSD sales by an average of 165% annually until 2013, IDC predicts. Gartner Inc. also expects a surge in flash use, projecting 2009 sales of 281,000 SSDs, up from 59,000 last year.

In addition to fast access to data stored in the cloud, Facebook anticipates that flash storage can provide "tremendous" gains in reliability while using significantly less power than other storage systems, Heiliger said.

MySpace expects that flash storage could save space in data centers while still supporting the fast page loads that users demand, according to Buckingham. By replacing disk drives with flash technology, MySpace can use 1U servers instead of taller 2U models, which would save a lot of space in a company whose data centers collectively occupy 60,000 square feet.

MySpace also hopes to one day use flash technology to cache frequently used data and to maintain indexes for searches, Buckingham said.

However, the social networking company won't rely on flash for persistent data, such as the pictures users post on their pages. Only about one-twentieth of the company's data would ever be stored on flash. "I'm never going to write something to an SSD and hope it lasts forever," Buckingham said.

MySpace is working with flash vendors to establish baselines for performance and reliability, he added.

Hoping to take advantage of the growing demand, several top storage vendors have unveiled flash technologies in the past year. Many of the offerings are based on products developed by Stec Inc. in Santa Ana, Calif.

EMC Corp. added SSD technology to several of its storage offerings, while IBM executives have said that flash should be available for all of the company's enterprise storage platforms by the end of this year. Meanwhile, Hewlett-Packard Co. offers SSD technology for its high-end XP storage arrays and midrange Enterprise Virtual Arrays, as well as flash cards made by Fusion-io Inc. that fit into HP servers. ■

Lawson *is a reporter for the IDG News Service.*

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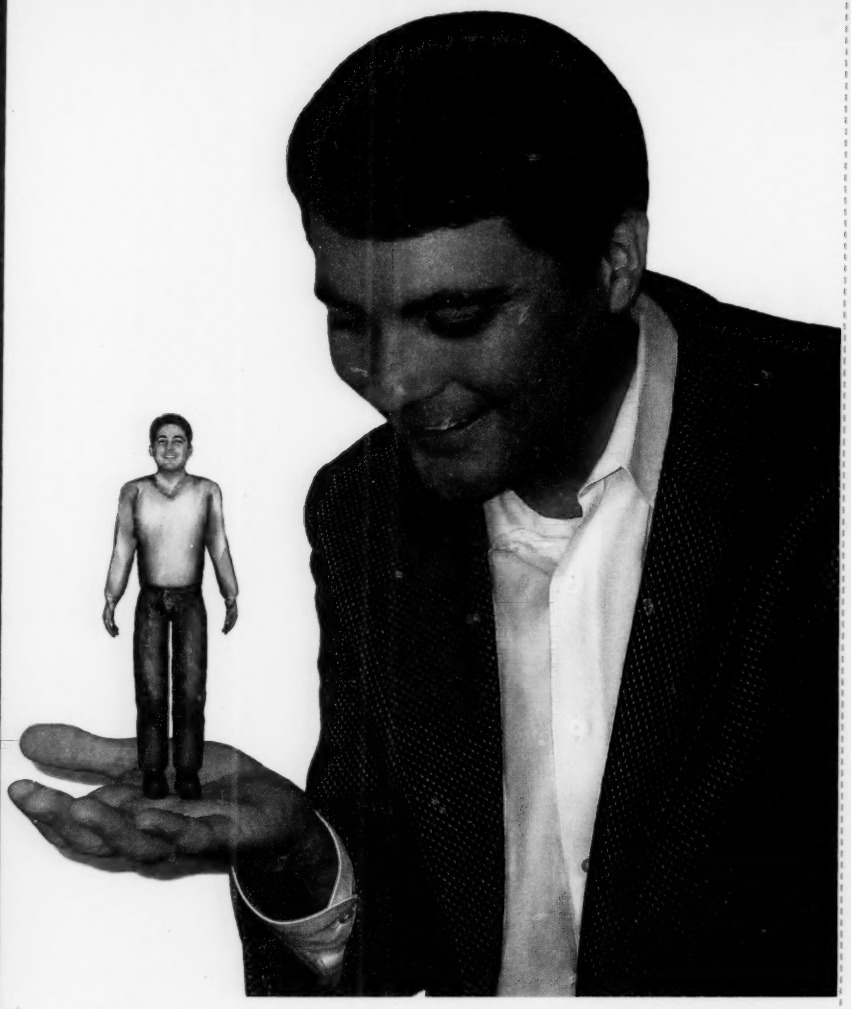

Dossier

Name: Aaron E. Walsh

Title: Director

Organization: Immersive Education Initiative

Favorite nonwork pastime: Walking

Most interesting thing people don't know about you: "I hate to walk."

Favorite vice: Miami

Dream dinner guests: "Attila the Hun and Mary, Queen of Scots. Just imagine the appetizers."

■ THE GRILL

Aaron E. Walsh

An early interest in **virtual reality** blossomed into a passion for **education environments** that can engage students through **interactive visualization.**

Aaron E. Walsh's career path isn't strewn with traditional milestones. Since the age of 18, when he was hired as a computer equipment operator at Boston College, where he now teaches, Walsh has been pretty single-minded about one thing: bolstering education through the innovative use of virtual reality technology.

After five years at the college (where officials hadn't a clue he was still a teenager when they hired him), Walsh founded Mantis Development Corp., a software firm that specializes in digital media and network computing. He then used several million dollars in profits from that venture to launch and personally fund the Media Grid, a public infrastructure for 3-D and virtual reality content. Now 39, Walsh travels around the globe, tirelessly promoting virtual reality technology standards and the Media Grid's immersive education learning system. Immersive education combines interactive virtual reality and sophisticated digital media with collaborative online course environments. Ultimately, Walsh's vision is to help create a world in which a state-of-the-art education is freely available to anyone with a computer and an Internet connection.

Tell me about your early experiences with virtual reality. In about fifth grade, when I was learning to program — I was one of those kids who was taken to college at a really young age — what interested me most were the college kids around me making video games. I would go in to my mom's purse, take quarters and walk the half mile to Safeway to play Asteroids or Centipede. But I also knew all I was doing was playing. When I was around 18, I took a pretty hard line with myself and decided if I'm going to constantly spend my time in virtual reality, I'm going to work in virtual reality, not just play.

What happened then? I built my first virtual reality system from scratch in about 1990. It was built on a Macintosh and [a friend and I] had stereo headsets and a power glove so you could reach out and manipulate things. We were a spaceship going down corridors. I had been playing this video game on a keyboard, but when I was in a truly

Continued on page 14

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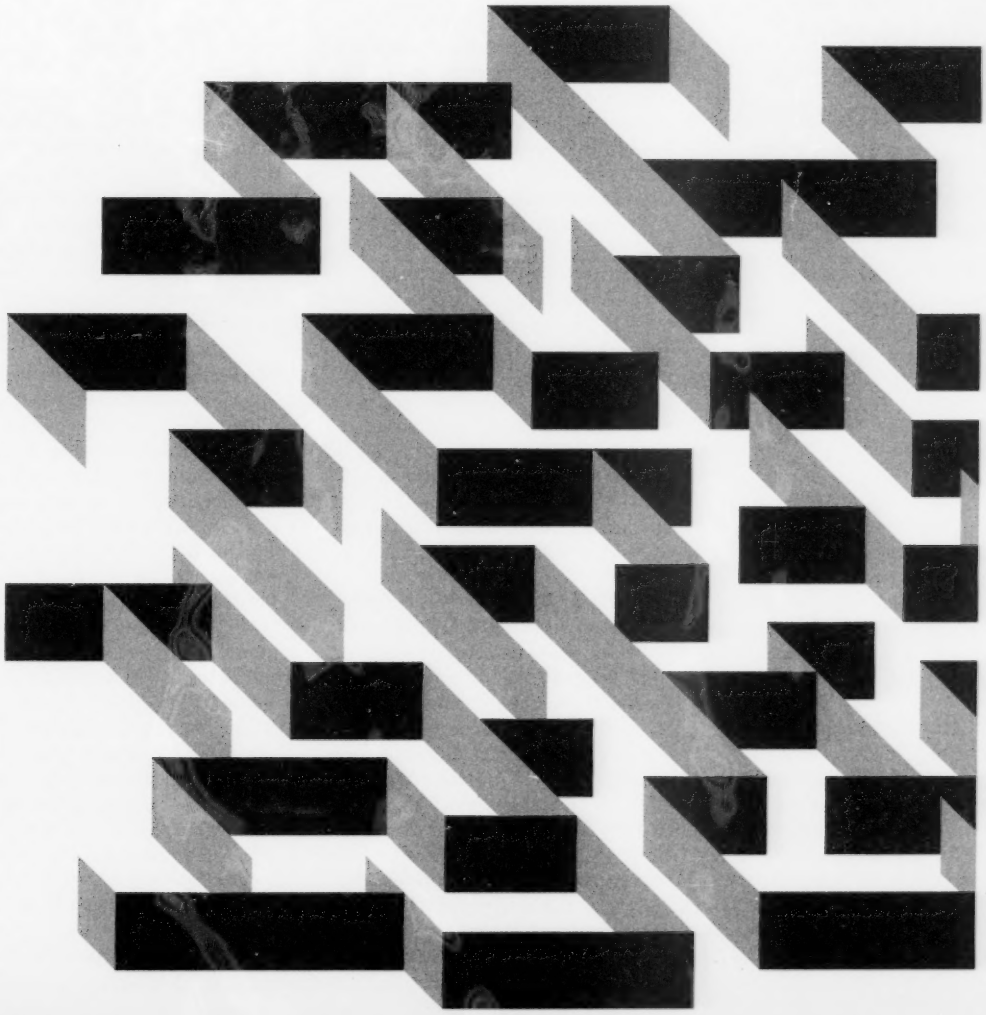

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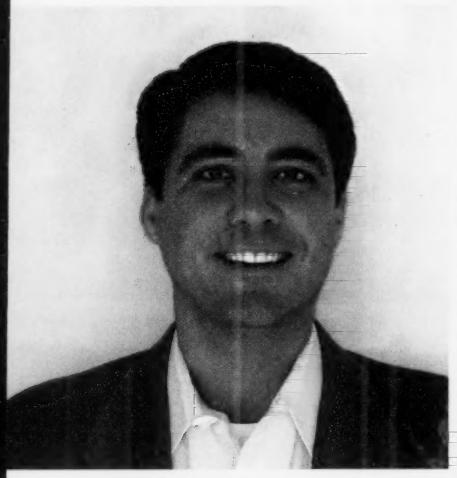


"I had an intuitive sense that [virtual environments] could make it easier for people to absorb complicated information, more so than reading could.

Continued from page 12

3-D immersive environment, it was an amazing feeling. I still remember the two of us waving our arms around controlling this spaceship. That's what started it all for me.

How did that lead to the Immersive Education Initiative? I was catalyzed by the ability to create a system. I started to really get a sense that this could impact learning. I had an intuitive sense that this could make it easier for people to absorb complicated information, more so than reading could. Throughout the 1990s, I worked on all of the enabling technologies.

What's the immersive education content like today? It's across the board. Architecture and design students are using virtual worlds to build spaces and then walk through them with fellow students and teachers. We have K-12 students building robots and creating robot galleries. We have mathematics content where you get to visualize mathematical structures and walk around them. When an algebraic equation is visualized, it can be like a flower or a waterfall. Different formulas create different visuals. We also have a fair amount of cell biology content. You can see a DNA structure and manipulate it. You can plant virtual tomatoes and do cross-pollination with other plants and see them grow. There's an ability to fly though the body as a red blood cell.

How is learning in the virtual world better? What are the benefits? In order to learn, you need to engage the mind, and immersive education is engaging. We saw this even before we got back studies proving this. We saw kids locking into these virtual environments and not letting go. I'd tell students playing an interactive game about the Boston Tea Party to spend an hour exploring the ship and exploring the tea. They'd spend five or six hours because they said they were having fun. There's also something about doing, rather than just hearing or seeing. If you can do what you're supposed to be learning, you learn better. This is something that's borne out over and over again in studies about immersive education. Students learn faster and they retain more.

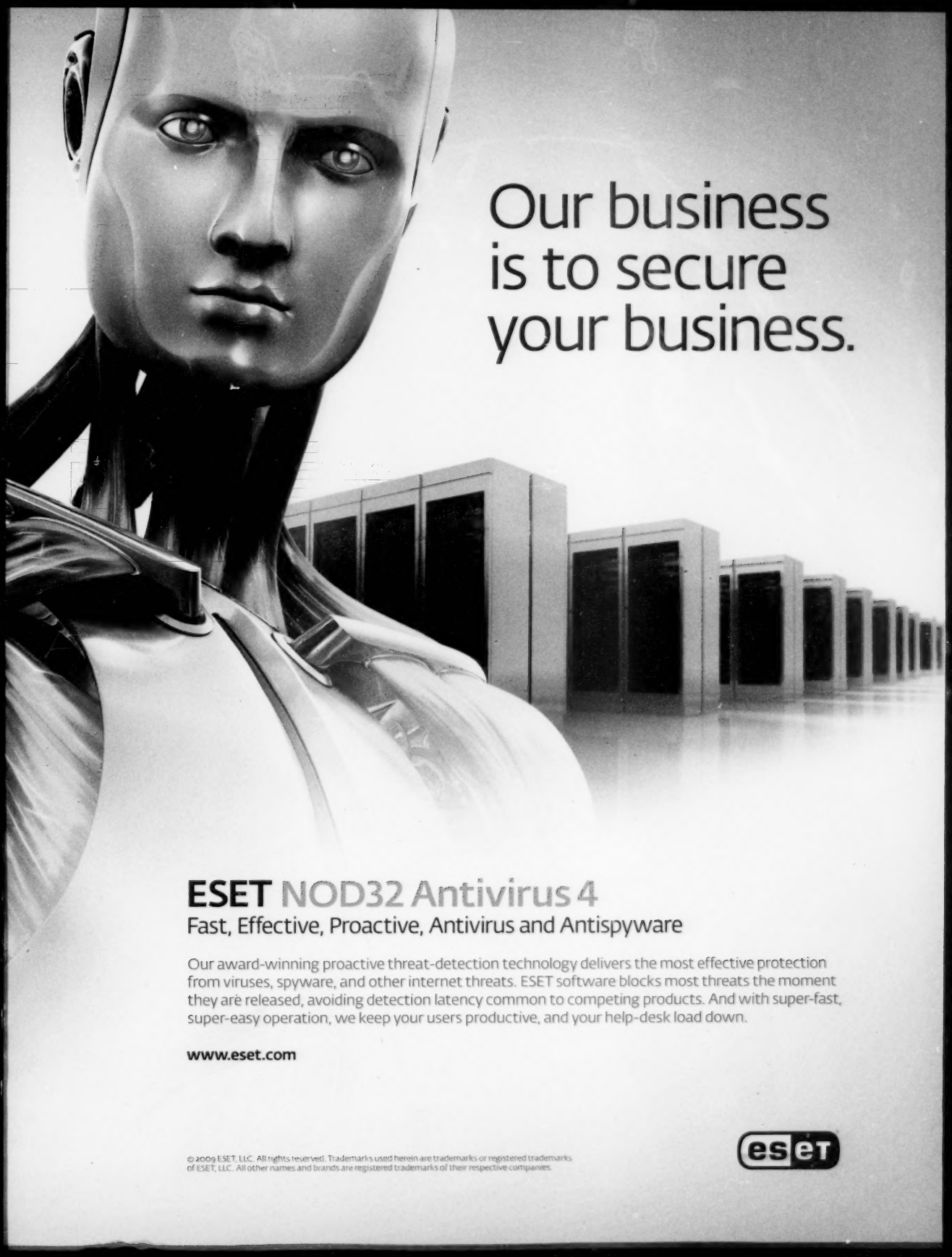
Who creates the immersive education content on the Media Grid? Educators, students — anyone else who is a member. Members need to provide credentials that show they're affiliated with a school. As long as they are affiliated with a school — a teacher, student, administrator or someone connected with education — they're eligible for general membership. They can get access to the technology for free, they can access community groups, and they have the ability to get going right away. It's free. We're nonprofit and inclusive. An educator can craft content for a particular course and keep it private, or they can turn it back over to the community. Most of what we see is that academics want to share. We have a fairly vibrant community of developers.

What's been the reaction in public schools, where so much emphasis is placed on testing and teaching to tests? No K-12 educator I ever met has a leisure life. There's teaching, then grading and other responsibilities. Now you're saying to them, "Here's a new technology that's more complicated than teaching to a test. Here's something brand-new that doesn't have a track record." But in each school, you find the fairly young teachers. We have young educators who were raised on digital media and digital entertainment, and they get it. But it's true. These technologies are not used to teach to a test.

Immersive education is not going to boost test skills. We have schools using these technologies because they see that kids come in and want to take the class. Normally, these same kids might be tardy, but now they're showing up because they know the class will have this technology. Right now, it's an engagement tool. You need to engage them before they can start to learn.

When will you know you've succeeded? When anyone with access to a computer can get a quality education at no cost. I think education is a fundamental human right. We will develop a comprehensive and complete form of study so someone with access to a computer could take rich, compelling courses and learn at the same level as someone going to a university. With simulations and virtual environments, we'll have such a large body of information that it will be up to the individual to decide what they want to learn. The role of schools will morph over time. I think the purpose of a lot of brick-and-mortar institutions will come down to making human connections. The experiences of networking with friends and meeting with faculty face-to-face will be the differentiating factors of [physically] going to the university.

— *Interview by* **Julia King**



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AWK!

LAID OFF? HERE'S YOUR NET

Executive support networks help CIOs achieve a soft landing. By Mary Brandel

WHEN WADE VANN, former CIO at Simmons Bedding Co., was laid off in the summer of 2008, it was naturally a difficult time. "When you've been working 60 to 70 hours a week and that goes away, it's a big deal," Vann says. "There's a lot of stress you've never had to deal with before, including your own sense of self-worth."

What cushioned the blow, he says, were the networking groups he joined that not only helped him maintain a routine, meet people he otherwise would never have met and fine-tune the logistics of his job search, but also provided a generous helping of emotional support and specific job leads. "I was amazed at the amount of help," says Vann, who recently accepted a CIO position at Augusta Sportswear Inc. in Augusta, Ga. In one group, he says, to be accepted as a member, you had to have a pay-it-forward attitude in terms of helping others — not yourself — find a job, even though other laid-off CIOs (i.e., competitors) were members as well.

To Vann, networking is the key to most successful job searches. "It takes a lot of work to spend a major portion of your day making cold calls, but it does pay off, and I've developed relationships with people I will stay in touch with for the remainder of my career," he says. "That part of the transition has been a true blessing."

Generally, networking groups for executives in transition meet once a week to once a month and provide a variety of services, including expert speakers on career transition topics, job leads from affiliated outplacement firms, and group meetings for network-

GORDON WIEBE ILLUSTRATION

ing. As Vann found, the number of such groups is growing, as are the ranks of the jobless in networking groups intended for both employed and unemployed executives. He says a couple of the networks he was in outgrew the facilities they used for meetings.

Case in point: the Executive Network Group of Greater Chicago. A nonprofit organization that's been in business 19 years, ENG has seen its membership more than double since the beginning of the year, to 366 members, according to Executive Director Chris Campbell. Attendance at ENG's monthly meetings has substantially increased, to the point where the group has to turn away some people because the room holds a maximum of 200.

If there's a silver lining to the rampant layoffs from the recession, it might be the support that displaced executives are providing to one another, both online and off. "Most of these executives have never had to figure out what it's like not to have a job, but everyone has a pay-it-forward, 'we're all in this together' attitude," says Ryon Harms, who was in transition for four months before accepting a position as director of Internet marketing at EFI Sports Medicine in San Diego. Harms also co-founded a networking organization called Pacific Executive Network and runs a blog advising executives about using social media to expand their networks. "It's interesting to see everyone helping each other out with no real expectation that the person would help them back but that somebody else in the community would," he says.

This expectation is written into the mission statements of some groups. At the Technology Executives Networking Group (TENG), for instance, members are expected to share at least three job leads per month, including leads they are actively pursuing or for which they could be a candidate. The rationale: Nearly any position would likely have hundreds of applicants who could do the job, so adding a few more won't significantly impact anyone's chances, and the benefits of having a friend land the job far outweigh the downside of competing with a few more candidates.

Other groups are less formal, but the expectation is that members will provide what Vann calls "a warm introduction." So when a member targets a company that seems to be a good fit for his background, it's expected that he should be able to ask fellow members of the network if they can introduce him to key executives at the company.

Either way, one thing is for sure: For executives, networking has become as much a part of this recession as clipping coupons and cutting the cable TV subscriptions. "Everyone figures out quickly that networking with fellow executives is the only way to get through the clutter of submitting résumés that get lost in a pile with thousands of others," Harms says. "So they're joining networks, shaking other people's hands and seeing how they can help each other find a job."

If you're thinking of joining a network, here's some advice from other laid-off executives who have either found new jobs or are otherwise reaping the benefits.

IT'S NOT ALL ABOUT A JOB

When Tom Siko was laid off in 2007 from Covansys Corp. after it was acquired by Computer Sciences Corp., he had spent 25 years in IT, the majority in consulting. He's a member of two networks — ENG and the Technology Leaders Association, in which about 40% of the members are in transition at any given time. Both networks, he says, are great support groups, above and beyond their job search benefits. "You see people in the same situation you're in, sometimes even people you know, and they all have a positive attitude, which helps a lot in this situation," he says.

Vann agrees. "You have very little control over this process, and that's a difficult thing," he says. For instance, it's easy to sit in your home office and get discouraged, especially when you go through a period of not getting any leads. But if six other people you respect say they also aren't seeing opportunities, it provides perspective. "If I was at home, with no one to talk to, I'd get real concerned. But by listening to others, I can think maybe it's not so bad after all," Vann says.

GO BEYOND THE UNEMPLOYED

While it's important to network with unemployed peers, it's equally important to network with employed professionals, particularly hiring managers. Vann recommends spending about one-third of your time networking with unemployed people and the rest with people who have jobs. "If you're working on a particular company that seems to have opportunities, try to find people who work in that organization who can help you better target open positions," Siko says.

HEY, NO SLACKING!

When planning which executive-level networks to join, consider including one that requires you to report on your job search activities. Those groups help keep you productive, says Wade Vann, CIO at Augusta Sportswear. "When you have to tell someone what you've been doing, it holds you accountable," he says. "You don't want to say you played golf three days that week and nothing else."

After joining the Executive Network Group of Greater Chicago (ENG), Dennis Burnell helped create what he calls job search work teams, which are groups of about 10 people who meet weekly and report on metrics such as the number of hours they dedicated to their job searches, the contacts they made, their activities and the results of those activities. "It's a very business-oriented meeting," he says. "If you have to report numbers, it's amazing how motivating that is."

The members of those groups have also helped one another finesse their responses to typical interview questions. "It takes an uncomfortable process and makes it more functional and productive," says Burnell.

The results show: His own work team held its first meeting in January, and so far, one-third of its members have landed jobs. In fact, he says, the majority of people he knows at ENG who have found jobs have been in a job search work team.

– MARY BRANDEL

"Everyone figures out quickly that networking with fellow executives is the only way to get through the clutter of submitting résumés that get lost in a pile with thousands of others. RYON HARMS, CO-FOUNDER, PACIFIC EXECUTIVE NETWORK

DIVERSIFY BEYOND YOUR FIELD

It's not unusual to belong to more than one network, and it's important to expand beyond those that are specifically for IT. When Vann was laid off, he already belonged to an Atlanta-area IT industry association, but he also joined several other group, including the Kettering Executive Network, a private network for senior-level professionals in Atlanta. About 140 of KEN's 750 members are in transition, Vann says.

Meetings are once a week, and there are additional special-interest groups that meet every two weeks. Members help one another develop personal marketing plans, prepare for interviews and target companies with opportunities that best match their experience.

Vann also created his own eight-member multifunctional work team, which meets every two weeks and includes a CEO, a CFO and vice presidents of operations, sales and human resources. Within 110 days of the group being formed, five of the eight members had landed a job, including Vann.

What Siko likes about ENG is that it is made up of a diverse set of people, including lawyers, sales managers, accountants and marketing executives. "If you're just in an IT-specific organization, you don't get the perspective of companies you're out there looking to get employed by," he says.

As a member of two groups, Siko might attend five to seven meetings per week, whether it's a group meeting or a one-on-one phone or in-person meeting with a network member or someone he was introduced to via a network.

Getting outside of IT helps widen your perspective, says Dennis Burnell, who joined ENG in early 2008. Burnell spent many years as a sales exec in the telecommunications industry, including a position as director of sales at Ericsson Inc., before moving into IT. He also had a stint in real estate development in 2007. "Business is transitioning at a rapid rate, so to be germane just to IT or one discipline really limits your perspective as to where you want to go," he says. There are only so many CIO positions, he points out, "so you'd better look at more transferable skills."

PAY IT FORWARD

The expectation at many executive networking groups is that you should be as willing to help out others as you are to accept help for yourself. This isn't only for altruistic reasons. As TENG's Web site explains, "By helping our peers solve key problems, we demonstrate our value in tangible terms and position ourselves above the crowd." The people you help will remember you — particularly your self-confidence and selflessness, it says.

That helps build what Harms calls "social capital." And thanks to social media, you can spread a wider net by benefiting from the indirect reciprocity that online communities enable. "With direct reciprocity, you do someone a favor, and they do you a favor back," he says. "With indirect reciprocity, you do someone in your community a favor in anticipation that someone else within the community will return the favor."

LEARN TO USE SOCIAL MEDIA

Both Siko and Burnell make use of LinkedIn in addition to face-to-face networking. Siko says the site has been very useful in helping him identify people within his network who can introduce him to people at companies he has targeted for employment. Burnell started a LinkedIn group for ENG where people post open positions, and he says the site helps him maintain "a virtual Rolodex." He also actively pursues recruiting firms to join the group.

Harms is proud to say he built a network of 400 people within just a few months. But it wasn't long before he wanted a way to communicate with this network beyond sending people his résumé or following up on interviews or job leads. That's why he started his blog on using social media for networking; he figured it would be valuable to send blog posts on that topic to his network contacts. "It's content that's useful versus asking a favor," he says of his blog, The Social Executive. Plus, the posts tend to get forwarded to others, which builds his network even further. Harms says a few thousand people read his blog each time he posts.

Harms advises all executives in transition to start a blog. Rather than sending the typical "Is the job still available?" e-mail, you can send potential employers posts that talk about your industry or something that's useful to their day-to-day work, he says. He sees blogs eventually supplanting résumés as a means of showcasing your capabilities to employers.

GO BEYOND ONLINE NETWORKS

While there's a lot to be said for social media, don't let it completely replace face-to-face meetings, Burnell warns. Sites like LinkedIn don't display all the contacts people have, since some executives shy away from connecting on a social network for fear of looking disloyal to their current employers.

GO BOTH BROAD AND DEEP

In addition to the quick introductions to people that networking group meetings afford, it's important to identify people with whom you feel a synergy and meet with them individually, Siko says. "When you foster a deeper relationship, you're more apt to look out for opportunities for each other," he says, "and that's where true networking happens." ■

Brandel *is a* Computerworld *contributing writer. Contact her at marybrandel@verizon.net.*

Executive Networks

Here's a sampling of executive-level networks that can help IT leaders in the midst of career transitions.

- **The Executive Network Group of Greater Chicago**
  www.engchgo.org
- **Pacific Executive Network**
  http://pacificexec.wordpress.com
- **Senior Executive Networking Group - New England**
  www.seng-ne.org
- **Technology Executives Networking Group**
  www.theteng.org
- **Technology Leaders Association**
  www.techleaders.net
- **Kettering Executive Network**
  www.ketteringexecutivenetwork.org
- **Executives Network**
  www.executivesnetwork.com
- **40Plus of Greater Washington**
  www.40plus-dc.org

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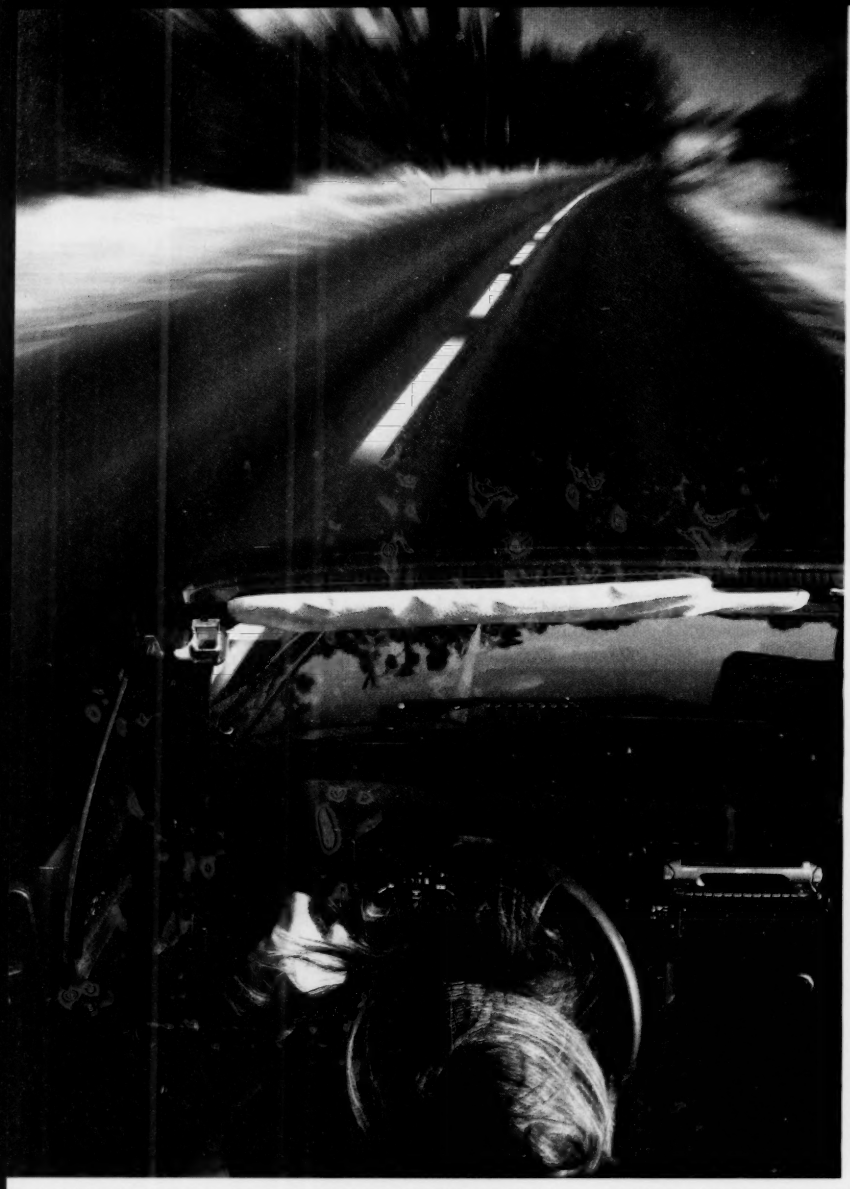

STEERING CLEAR OF Scandal

Savvy CIOs do more than legal compliance. They help the business avoid ethics disasters.

By Mary K. Pratt

THE IT STAFF at Texas Health Resources Inc. must deliver more than technical functionality. And it needs to deliver more than the business requirements: It also has to meet the organization's ethical standards.

To that end, its systems must help ensure that Texas Health complies with laws and regulations. And they also have to promote the right behaviors and prevent or flag undesirable ones, says Michael Alverson, vice president and deputy CIO at the Arlington-based nonprofit health care system.

Consider the challenge of handling patients' medical records. Even though the federal Health Insurance Portability and Accountability Act mandates that agencies keep those records private, caregivers still need to access them — when appropriate.

So the organization's electronic health records system gives doctors

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and nurses who are caring directly for patients quick access when they use the right authentication, Alverson says. But additional authentication is required to get records for patients who aren't under the provider's immediate care. The system records who gets access to what, allowing officials to audit and review cases to ensure there's no inappropriate access.

The IT staff holds itself to similar ethical standards, too, Alverson says. The department has policies that prohibit taking gifts and endorsing vendors, to help guarantee that workers make procurement decisions only based on quality and needs. And when there's any question — such as when a vendor proposes a deep discount if Texas Health agrees to be an early adopter of a new technology — IT leaders can turn to the systemwide Business and Ethics Council for guidance.

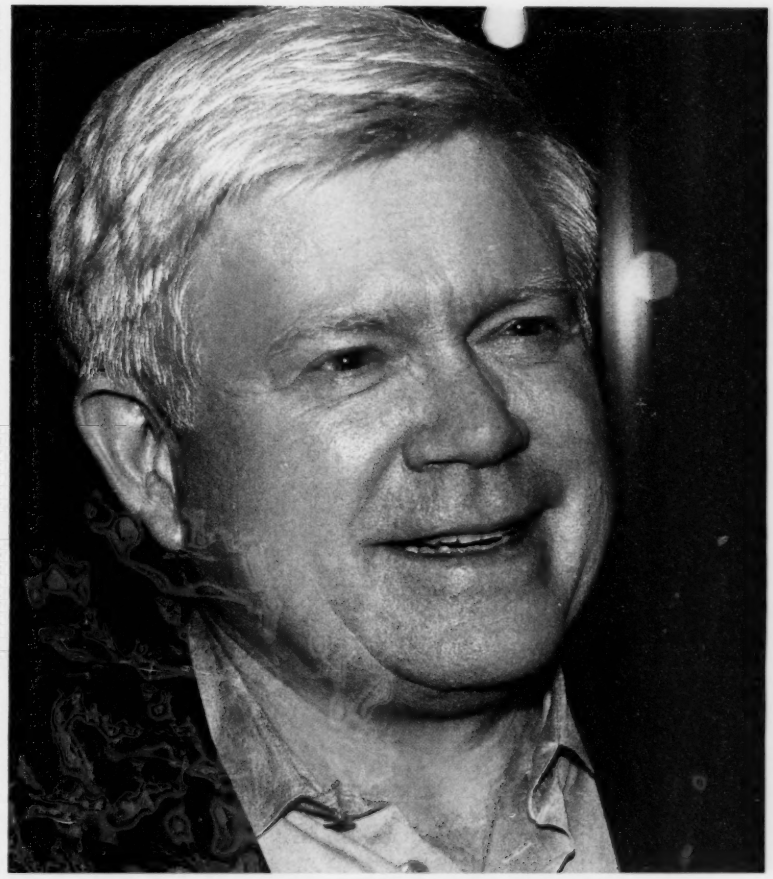
"If we really want everyone to subscribe to the idea that working at Texas Health is special, then we have to have people actively believe in doing the right thing," Alverson says.

Companies are increasingly looking at their ethics policies and articulating specific values that address a range of issues, from community commitment to environmental sustainability, which employees can use to guide their work. The need to comply with federal laws and regulations drives some of this, while consumer expectations, employee demands and economic pressures also play a part.

"Companies use the term 'corporate ethics' to mean many different things. In many organizations, if not the majority, it means compliance with a set of legal and minimum standards. In other organizations, corporate ethics means defining a set of corporate values that are integral to how they go about business," says Kirk O. Hanson, executive director of the Markkula Center for Applied Ethics at Santa Clara University.

Either way, CIOs have an opportunity to show how technology can further their companies' ethics objectives.

"Policy decisions at the very senior level need the sensitivity that IT experts can bring to the table," Hanson says. "CIOs will know the capabilities of IT and be able to contribute that to corporate strategy. They will also know the misuses of those capabilities and be able to flag those and prevent the organization from stepping in scandals."



"Policy decisions at the very senior level need the sensitivity that IT experts can bring to the table.
KIRK O. HANSON, EXECUTIVE DIRECTOR, MARKKULA CENTER FOR APPLIED ETHICS

Hanson cites a 15-year-old case in which marketing workers at a large telephone company spent millions of dollars to develop a list of customers with ties to the Washington area that they planned to sell to other marketers. In violation of company policy, they compiled the list using the company's database of customers who frequently placed calls to the District of Columbia.

Executives learned about the list before the marketing department sold it. IT then developed a system to monitor use and block future unauthorized access to such information, Hanson says. However, it came a bit late, since IT should have developed the application in advance, anticipating the need to protect the information as well as detect any efforts to breach it.

RED FLAGS

Hanson says IT today can build systems that can screen potential subcontractors and vendors to see if they share certain values. It's also possible to create tools that flag contracts whose costs exceed expectations in ways that suggest bribery or other improprieties, or set up systems that analyze customer satisfaction

Ethics: Harder In a Recession?

INFORMATION TECHNOLOGY consultant Dena L. Smith lays out a hypothetical dilemma: Should an IT department hire a more expensive vendor because the vendor shares its own company's ethics standards, or should it go with a lower-cost provider that doesn't?

Companies with established ethical standards that guide how they conduct business frequently confront this kind of question, Smith says, but it's a particularly tough question today, given the recession.

With IT departments forced to cut budgets and staff, CIOs will find it difficult to allocate dollars for applications that promote corporate ethics.

"The decisions were easier in the days when the economics were favorable, but the choices may have to be more limited now," says former CIO John Stevenson, president of consultancy JG Stevenson Associates. "Now it's how much can you afford to do versus how much do you have to do so you don't get burned."

Stevenson says companies that had moved toward certain ethical goals before the economic crisis – whether those goals involved green initiatives or corporate responsibility programs – aren't giving up their gains.

"But if they haven't done that yet, it gets more difficult to say we'll spend more money than we have to," he says.

Even when CIOs are committed to designing systems that promote ethical behavior, they usually have to sell the applications by promoting whatever financial benefits the tools can create – and not on any particular ethical merit.

Kirk O. Hanson, executive director of the Markkula Center for Applied Ethics at Santa Clara University, says he knows a CIO who had to justify everything by talking about the business's long-term financial interests rather than ethics.

"[Ethics represents] a very large spend for any IT organization, and it continues to grow.
DIANE BRYANT, CIO, INTEL CORP.

"He was afraid to [highlight ethics], because he thought he would be perceived in the wrong way," Hanson says. "In some organizations, a value-based argument will have some traction; in others, it will be disregarded or even ridiculed."

Diane Bryant, CIO at Intel, says complying with ethical standards isn't cheap. Consider, she says, that Intel's storage requirements grow at 35% a year, driven in part by the need to retain data for compliance reasons and to fulfill potential e-discovery requests.

"We do certainly talk a lot about the additional costs that come onto IT with all these additional ethics and security requirements. It's a very large spend for any IT organization, and it continues to grow," Bryant notes. "But it's talked about as a must-do. It's an accepted part of the IT budget."

– MARY K. PRATT

surveys to find evidence of unethical behaviors on the part of workers.

Meanwhile, companies that put green initiatives at the top of their ethical concerns can have IT create applications that track energy consumption to flag anomalies that indicate inefficiencies or calculate the corporate carbon footprint and identify ways to reduce it.

"You have to step back a minute and ask, 'What is the role of technology around ethics?' " says Dena L. Smith, senior technology consultant to the board of trustees at Capital University in Columbus, Ohio, and part owner of an IT consulting firm in Dublin, Ohio. "Technology can help from a monitoring, protection and prevention standpoint in a lot of ways."

The notion of corporate ethics hasn't always been so broad, says Mike Distelhorst, a law professor at Capital University Law School, a former adjunct professor of business ethics at the Capital School of Management and Leadership and former executive director for the university's Council for Ethical Leadership.

MORE THAN COMPLIANCE

Corporate ethics for a long time simply meant compliance with laws and regulations, Distelhorst says. But in the early 1990s, business schools started to emphasize the idea of integrity-based ethics, where companies developed ethics statements based on their own values and priorities and not just compliance with federal and state rules. Motives range from pure altruism to the notion that good ethics make for good business.

Still, he says, few companies are leaders in integrating their corporate responsibility programs into their day-to-day business dealings.

"You'd be hard-pressed to find any company that doesn't have a beautiful ethics and compliance program," Distelhorst says. "They're talking about it, and they're working it all out in various strategic documents. But the question is whether they're actually living by it. Some are, and clearly some aren't."

Regardless of where a company stands in the process, IT leaders should be ready to contribute, he says.

"These policies are worked out on the ethics and compliance commit-

Continued on page 26

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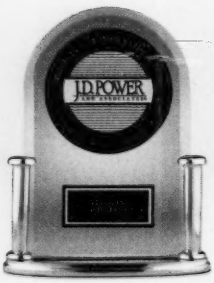

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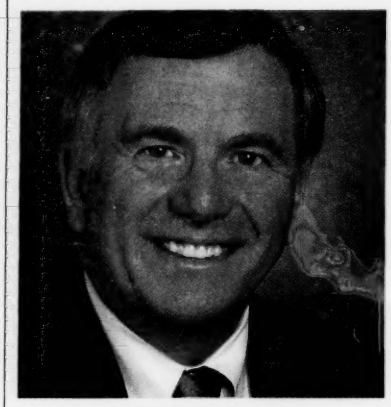

"We have to have people actively believe in doing the right thing.

MICHAEL ALVERSON, VICE PRESIDENT AND CIO, TEXAS HEALTH RESOURCES INC.

Continued from page 24

tees below the board level, and they're having the CIO as a key player," Distelhorst explains.

That's the case at Intel Corp., says the company's CIO, Diane Bryant.

Intel's Ethics and Compliance Oversight Committee established the following five principles for the company and its workers: Intel should conduct business with honesty and integrity; the company must follow the letter and spirit of the law; employees are expected to treat one another fairly; employees should act in the best interests of Intel and avoid conflicts of interest; and employees must protect the company's assets and reputation.

Intel's IT staff builds and maintains the systems that allow the company to meet its legal and regulatory requirements, such as those laid out for accounting and governance by the Sarbanes-Oxley Act, Bryant says. It also developed applications and a team of workers to handle document retention, which is crucial should there be a legal case with electronic discovery requests.

But IT also enables Intel to enforce its own values, and not just meet regulatory requirements, Bryant explains. So there are applications to help perform rigorous checks on suppliers to ensure that they have sufficient business continuity plans and environmental sustainability plans as well as ethical stances that match Intel's own. IT has also delivered sophisticated systems that monitor the power consumption and carbon dioxide emissions of Intel's data centers. And it developed systems that monitor for potential malicious behavior, such as violations of access management rights or the public release of Intel's intellectual property.

"We put solutions in place that help protect Intel's five principals," Bryant says.

Few companies are that advanced in their use of technology to further an ethical agenda, says John Stevenson, a former CIO who is now president of JG Stevenson Associates LLC, an IT management consultancy in Plano, Texas.

"The level of sophistication offered by CIOs varies," he says. "Some CIOs prefer to stand back and hear what the companies want to do. They're the ones taking orders."

Anemic leaders might do nothing more than block access to inappropriate Web sites, Stevenson says. Those at the next tier might deploy applications to comply with the laws that govern their businesses, but they probably wouldn't have systems that monitor or report on how their organizations meet higher-level, company-specific ethical objectives.

"There are really only a handful of organizations that have effectively used IT to support the ethics and corporate responsibility programs of their organizations," the Markkula Center's Hanson adds.

He says Corporate America is only now slowly moving from making commitments to certain ethics and values to actually putting them into practice.

"Companies recognize that they have to be on record as being committed, but they're not yet as convinced that they have to manage it like other parts of their business," Hanson explains.

But when companies do decide to move in that direction, that's when CIOs can shine, offering ideas on what metrics to use and what to measure.

"That's where IT can be a real leader," Hanson says, "since they know what can be measured and captured." ■

Pratt *is a* Computerworld *contributing writer in Waltham, Mass. Contact her at marykpratt@verizon.net.*

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Free Up Cash!

Inventory optimization — more important than ever — can preserve working capital in tough times. **By William Brandel**

WHETHER IT'S a truck, a tsunami or an economic downturn, the same general rule applies: You're better off if you can see it coming from a safe distance.

There aren't many companies that understand this notion better than Cisco Systems Inc. White-hot dur-

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Supply Chain Kinks

Supply chain managers identified the following as their top challenges:

Forecast accuracy	43%
Demand variability	39%
Mandates to drive more cost out of the supply chain	28%
Supply chain network complexity	27%
Lack of internal cross-functional collaboration and visibility	26%
Transportation costs	22%

SOURCE: GARTNER INC. SURVEY OF 201 SUPPLY CHAIN MANAGERS IN NORTH AMERICA, DECEMBER 2008; MULTIPLE RESPONSES ALLOWED

ing the '90s, the company was pummeled after its vaunted inventory forecasting system could not — or did not — predict the dot-com bubble's collapse.

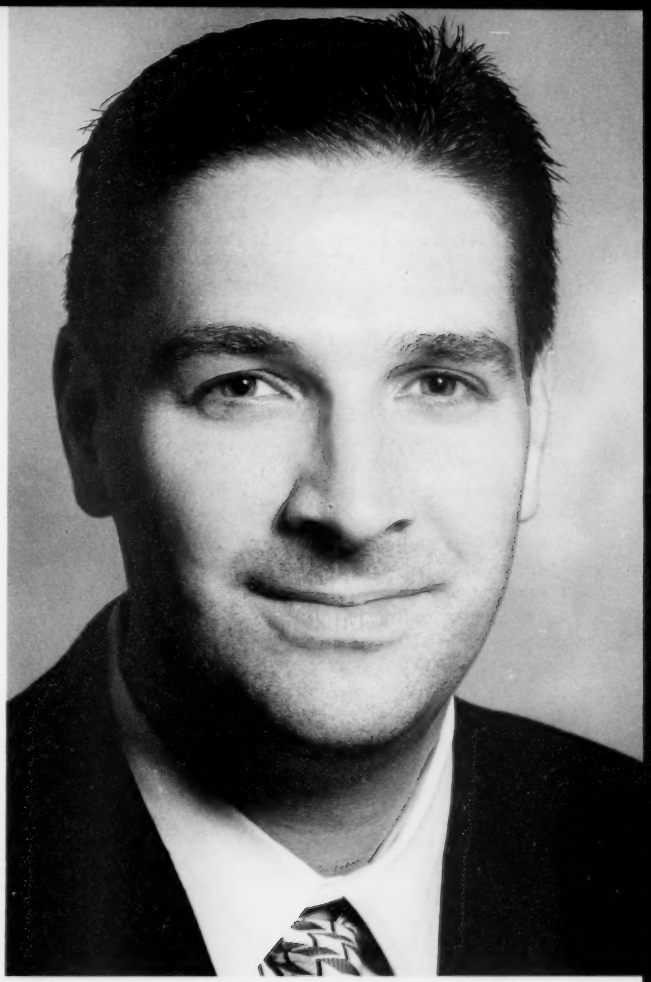
The result of this miscalculation was that sales were halved, the company lost 25% of its customers in a matter of weeks, and it ultimately wrote off over $2 billion in inventory. After that experience, Cisco's supply chain team vowed that it would never get blindsided again.

"There is a huge difference between now and 2001," says Karl Braitberg, Cisco's vice president of customer value chain management. Back then, Cisco's supply chain model was built on a "push" system, where products were made and inventory was built up in anticipation of market demand based on best-guess forecasts. "Then, when demand dropped, the supply chain froze. Nothing happened," Braitberg says. "We knew we had to build a new system that reacts better than just 'push.' "

Every company is tasked with matching its supply to consumer demand. In a normal business cycle, how well that job is accomplished determines whether the company is profitable. But this current economic downturn is anything but normal, and businesses are struggling to simply stay liquid. There are various strategies to help preserve working capital, including cutting head count, outlets and manufacturing lines. But for most companies, the key to capital preservation will be how well they can reduce their inventory levels.

Largely, companies are in survival mode, and they're looking to their supply chain management team to free up precious capital to help them do that. While it may not fall directly on IT executives to make that happen, their role in the equation is very strategic.

With globalization, outsourcing and increased compliance and security concerns, managing supply chain operations becomes increasingly complex. And shorter, more frequent product cycles targeting more-sophisticated markets create a need to manage more products and parts from remote locations. Add the pressure of shorter cash-to-cash cycles — the time from when a business extends credit to build inventory until the time it gets paid — into the equation, and the need for an intelligent, nimble and timely flow of information becomes critical.



"We now have the techniques in place to be hypersensitive to demand changes, and we can manage our way through a downturn.

KARL BRAITBERG, VICE PRESIDENT OF CUSTOMER VALUE CHAIN MANAGEMENT, CISCO SYSTEMS INC.

To have visibility as well as command and control, supply chain operations must be tightly integrated with the IT infrastructure. That isn't the case at many companies, and yet it may be the factor that determines success or failure as they endure and emerge from this downturn.

Like bloodletting, reducing inventory is a delicate matter that most people would prefer to avoid. Inventory can range from materials, to parts, to fully assembled products. Nobody wants to run out. If there's too little, customers won't get orders in a timely manner and market opportunities will be missed. Yet if a company carries too much and demand drops, then the inventory must be "bled down," or reduced in price, until it has a buyer.

During a strong economy and when cash flow is loosened, many companies can get by without rigorous inventory management practices, says Larry Lapide, director of demand manage-

ment at the MIT Center for Transportation & Logistics in Cambridge, Mass. But during a recession, he adds, "companies had better bleed down inventory to reflect the downturn in sales. If they don't, it just sits there."

Inventory optimization is so critical now because of its impact on available cash, Lapide says. In accounting terms, inventory is an asset. So inventory that is on the books through manufacturing, assembly and distribution represents credit-funded inventory. With credit at a premium, it's in a company's best interest not only to keep inventory levels tight, but also to sell goods as soon as possible.

Reducing costs and squeezing maximum utility out of fixed assets is nothing new to Black & Decker Corp.'s Hardware and Home Improvement Group in Lake Forest, Calif. The unit supplies hardware to big-box retailers that have responded to the economic downturn with new low-price strategies. It now falls on Scott Strickland, vice president of IS, to help the group squeeze down its own costs and maintain profit margins.

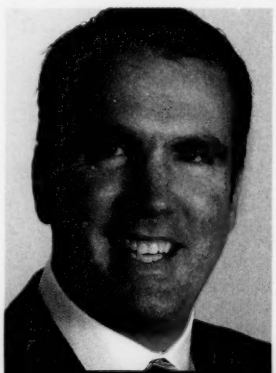
"We had been loath to drive inventory down to this level," Strickland says. However, the company had gained invaluable experience by deploying an integrated inventory management system prior to the downturn. The result was that the key decision-makers throughout its supply chain were operating with the same information, planners focused only on exceptions, and supplier and material issues were quickly resolved. The system, Strickland says, does the heavy lifting, and as a result, the unit has cut planning cycles from weeks to days and

Highest Priorities

Supply chain managers say the following are their top investment priorities this year:

Reduce operating costs	61%
Improve efficiency and/or productivity	55%
Improve customer service	38%
Use the supply chain to drive business growth	23%
Align supply chain with corporate business strategy	18%

SOURCE: GARTNER INC. SURVEY OF 201 SUPPLY CHAIN MANAGERS IN NORTH AMERICA, DECEMBER 2008; MULTIPLE RESPONSES ALLOWED



An inventory management tool helped SCOTT STRICKLAND's Black & Decker unit improve forecast accuracy by 10.4%.

improved forecast accuracy by 10.4%.

"If someone had told us nine months ago that we could lower inventory as fast as we could to address a sales decline, we would not have believed it was possible," Strickland says. However, "because of the impetus on freeing up working capital, we have been focused on lowering our inventory and levels. We figured we could do this, and it turned out to not be the bad experience we had imagined."

The effort to lower inventory levels to free up working capital has proved so effective that the Black & Decker unit and its partners are jointly considering making it standard practice even after the economy recovers, Strickland says.

CRISIS = OPPORTUNITY

O'Reilly Auto Parts Inc. in Springfield, Mo., uses inventory as a competitive differentiator, says Greg Beck, vice president of purchasing. One of the largest specialty retailers of automotive aftermarket parts, tools, supplies and accessories in the U.S, O'Reilly is responding to the recession differently than many other companies.

"Business is increasing because of the downturn," Beck says. "People aren't buying new cars but instead [are] putting more money into fixing old cars."

This isn't to say that O'Reilly lacks supply chain challenges or that it can let down its guard. As the result of an acquisition last year, the company increased its total store count to more than 3,300 and now operates in 38 states. To bolster its competitive advantage, O'Reilly's strategy is to increase customer service levels and replenish inventory on a nightly basis, while at the same time managing an increasing number of products.

The partnership between the supply chain operation and IT was critical to O'Reilly's strategy. The

GREG BECK: O'Reilly Auto Parts increased inventory turns by 44% with the help of replenishment software.

company is using Manhattan Associates Inc.'s replenishment software to collect product data information on the half-hour, while updates from the distribution centers are transmitted nightly. The replenishment system uses this data to determine the forecast for these products. As a result, O'Reilly has increased inventory turns by 44%, and it still manages to fulfill 97% of customer requests immediately, with 3% handled through separate channels. At the same time, the company reduced its inventory levels, freeing up $60 million.

UNDERINVESTING

Companies say that driving costs out of the supply chain is an important goal, but the big question is whether — especially during a recession — they can afford to invest in their supply chain IT infrastructures to help make that happen.

Dwight Klappich, an analyst at Gartner Inc., says he expects IT spending on supply chain applications to decrease through 2010 and that spending won't pick up again until 2011. Between now and then, IT departments are likely to focus on

You Have to Spend to Save

DESPITE SOME celebrated failures, most companies do realize cost efficiencies, if not competitive advantage, by using supply chain management software. Yet the cruel irony is that most businesses can't afford to buy it when they need it most.

A recent study of inventory optimization software, which helps determine what inventory should be where in the supply chain, underscores this dilemma. A study by IDC Manufacturing Insights found that organizations that deployed inventory optimization systems saw a meaningful return on investment in a relatively short period of time. Results varied by company, but some of them reduced their inventory levels by up to 25% in one year, while others enjoyed a discounted cash flow above 50% in less than two years.

The report says it costs about $300,000 to $500,000 for inventory optimization software, plus about the same amount for implementation, which can take four to six months.

However, in this recession, companies are cutting spending wherever possible, including software purchases. So it's not clear whether they can afford to buy a tool that could help them loosen up cash by optimizing inventory levels.

– WILLIAM BRANDEL

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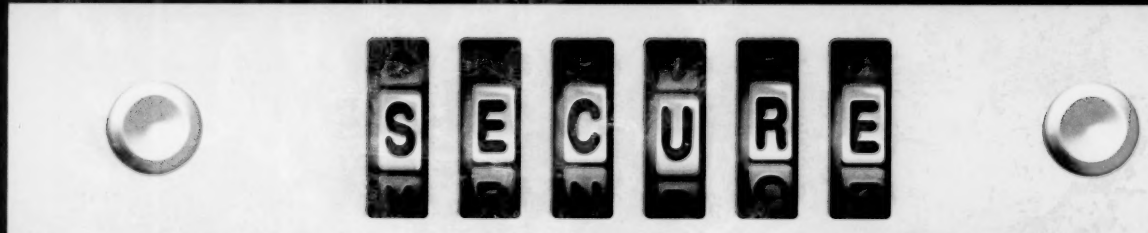

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tactical investments, such as forecasting or transportation management systems, rather than on strategic supply chain transformations.

Klappich calls that a shortsighted and, in the long term, costly approach. "If this trend continues," Klappich stated in a report, "this myopic focus on short-term tactical issues, while necessary for many businesses, could widen the gap between the best-performing organizations and lower-performing organizations."

MIT's Lapide agrees. Companies need to pay more attention, not less, to using cross-functional collaboration to get a better view of demand variability. "IT is needed to get these operational and system silos connected," Lapide says. "IT, supply chain, sales — you name it — they all have a common enemy. They have to join together and work to get rid of these silos."

> **"IT, supply chain, sales – you name it – they all have a common enemy. They have to join together and work to get rid of these silos.**
>
> **LARRY LAPIDE,** DIRECTOR OF DEMAND MANAGEMENT, MIT CENTER FOR TRANSPORTATION & LOGISTICS

Cisco understands this. After the 2001 downturn, it made major system investments to transform its "push-driven," siloed supply chain model into an integrated "pull system" that can extract timely data from suppliers and downstream partners. This reorder data is sent to Cisco after being triggered by specified parameters and algorithms, to shape "demand signals."

The system doesn't operate in a vacuum. Cisco has optimized its forecasting algorithms by bringing together representatives from its marketing, finance, sales, supply chain and IT departments, and from key customers, as part of its sales and operations planning process. This group collaborates to create a common view of demand signals. This input drives an agreed-upon plan of action to align manufacturing capacity and inventory deployment and meet customer service levels. In short, they work together with the same data to optimally match supply and demand.

"Now, if there are no pull signals, nothing gets brought into the system," says Cisco's Braitberg. Manufacturers don't continue to source and build inventory that may sit in some warehouse waiting for customers who may never buy it. Cash is freed up for other purposes.

While Braitberg acknowledges that even past history can't be used as a template for this downturn, Cisco is confident that it has better visibility into market demand when it goes down, and that it will be ready when the green shoots emerge.

"We now have the techniques in place to be hypersensitive to demand changes," Braitberg says, "and we can manage our way through a downturn." ■

Brandel *is a freelance writer and industry analyst in Newton, Mass. Contact him at wbrandel@verizon.net.*

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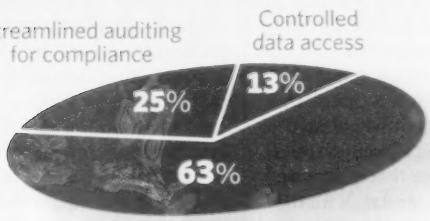

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Woes Hang Up New Phone Policy

A **global company** is sure to have a lot of different kinds of **mobile devices.** And that's just the **start of the problems.**

Trouble Ticket

AT ISSUE: It has taken months to implement a new security policy for mobile devices, and meanwhile a new CIO has arrived.

ACTION PLAN: Start by helping the new CIO understand the value of passwords.

OVER THE past seven months, I have led a team of IT representatives in making sure that all mobile devices are aligned with our new security policy. I thought this was going to be straightforward — a few mouse clicks to check off some boxes, and our policy would be in effect on our entire inventory of mobile devices.

But because months have gone by since our previous CIO (more on that later) signed off on our security policy, you can probably guess that things weren't as easy as I expected.

The policy is pretty simple. It states that all mobile devices that are used to connect directly to our network or that otherwise synchronize data with the network must have four-digit passwords, must time out after 30 minutes of inactivity, must wipe themselves of all data after 10 unsuccessful log-on attempts, and must be capable of being controlled by our IT department and of being remotely wiped if lost or stolen.

The first problem is variety: We use something like 25 or 30 different kinds of phones worldwide. While most of them are BlackBerries, iPhones or Windows smartphones, there are plenty of variations. Nokia, Samsung, Motorola, LG, HTC and PCD are just some of the vendors we use. That diversity makes it pretty much impossible to fully test every phone with every operating system.

On the other hand, there are only two methods by which mobile phones can connect to our internal network: one for BlackBerries, and one for every other device. The latter uses Microsoft ActiveSync. One of the major differences is that ActiveSync passwords can't be reset. If a user forgets his password, he must wipe the device to the factory default setting. Ouch! That was a factor in one notable complication we encountered as we began testing some widely used devices.

■ With ActiveSync, if a user forgets his password, he must wipe the device to the factory default setting. Ouch!

Nokia phones that some employees were using in Singapore had come preconfigured with default passwords. The passwords weren't activated but were nonetheless bound to the devices. When we pushed the ActiveSync policy to those phones, they locked, and the users thought that they were supposed to create new passwords. Many of them ended up trying to input a password 10 times; guess what happened.

STARTING OVER

After many trials and tribulations during our limited tests (the Nokia situation is only one example), I suddenly found myself back at square one. That's because our previous CIO had procrastinated on approving an executive communication authorizing us to deploy the mobile device policy to a handful of BlackBerry-using executives before undertaking a global rollout. (We've had no problems with BlackBerries.) He probably didn't care to get involved in the issue because he knew he would be leaving soon.

When I approached our new CIO, he began to question me on the need for passwords for mobile phones. He wasn't reacting to our deployment woes; he simply didn't see the need for such a policy. I had to explain about the risks involved should an unprotected BlackBerry phone fall into the wrong hands.

To underscore the potential for theft of intellectual property, I used my BlackBerry to browse to an unprotected, internal Web site that is loaded with sensitive materials that it is my job to protect. Without passwords, I said, a competitor who came into possession of one of our BlackBerry phones would have unimpeded access to all such sites and the information that they contain.

Sometimes a security manager just has to conjure up some scary scenarios to make a point. I'm pretty sure he got it, but I'll know for sure in a week or so when I pester him again to approve the executive communication. ■

This week's journal is written by a real security manager, **"Mathias Thurman,"** *whose name and employer have been disguised for obvious reasons. Contact him at mathias_thurman@yahoo.com.*

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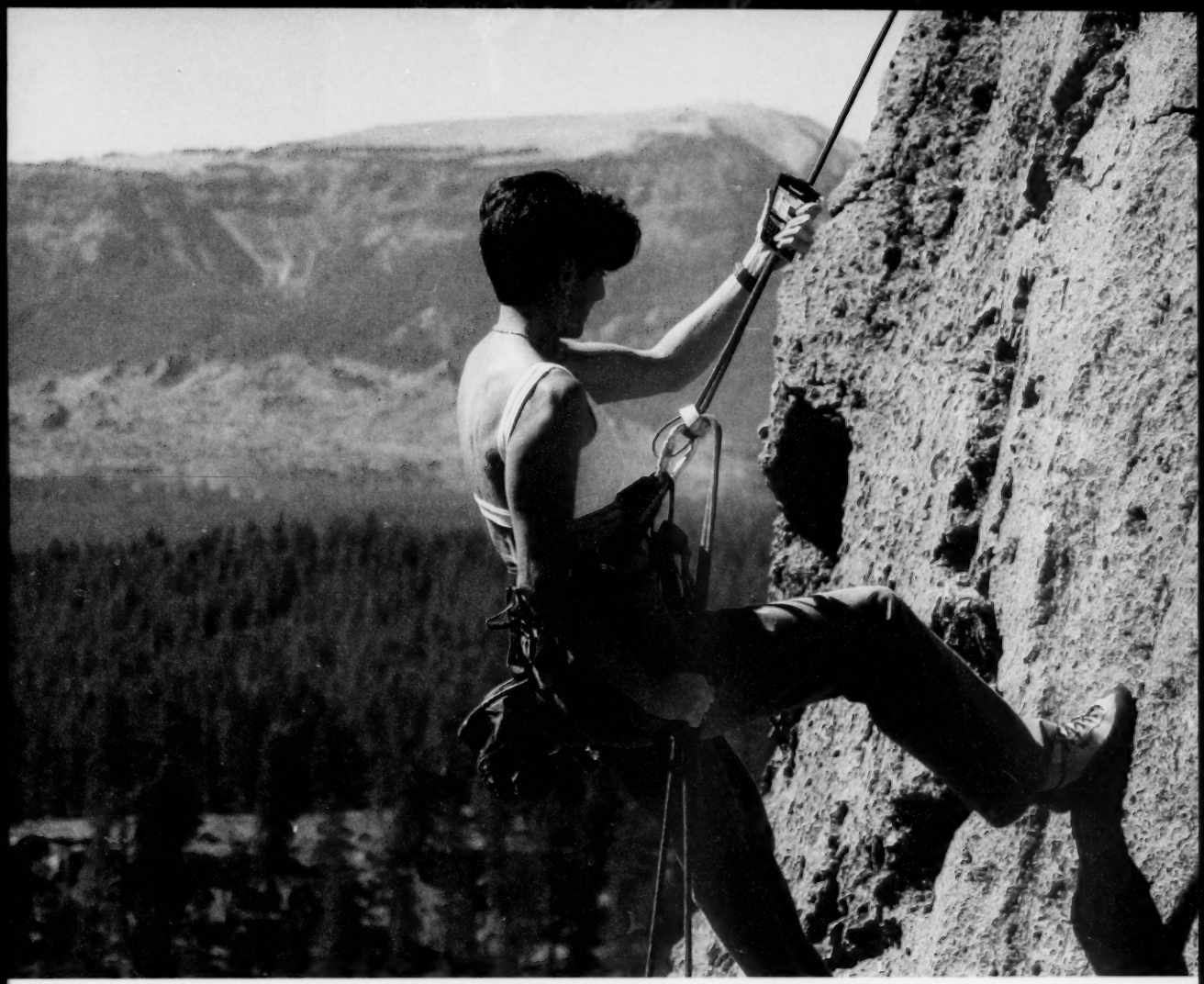

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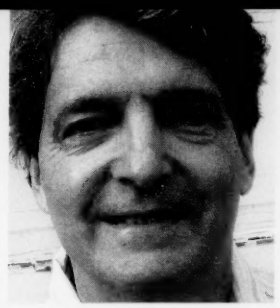
OPINION

Preston Gralla

How Microsoft Got Its Mojo Back



IF YOU BELIEVE the pundits, you'd think that Microsoft was one step from the grave, a company teetering on the edge of financial ruin and no longer technologically relevant. After all, its most recent financial results show that Microsoft has had the worst year in its history. For the first time, revenue from Windows dropped from the previous year — $3.1 billion for the quarter that ended on June 30, compared with $4.36 billion for the same quarter a year earlier.

The sagging economy is only partly to blame. Many problems are of Microsoft's own making. From a business point of view, for example, Vista was an unmitigated disaster. Enterprises have avoided it like the plague. *The New York Times* noted that a study by Forrester Research found that 86% of corporate PCs still run XP.

Then, of course, there's Google, which owns the Internet search market even though Microsoft has spent untold amounts of money trying to catch up. And Google has targeted the heart of the Microsoft empire by announcing that it's developing an operating system called Chrome and by pushing Google Apps as a lower-cost or free alternative to Microsoft Office.

Sounds grim, doesn't it? The truth, though, is that in the midst of all the bad news, it looks as if Microsoft has finally gotten its mojo back. There's evidence that it may be recovering from its worst year ever.

For a start, the new Windows 7 operating system is fast and responsive and has fixed many of Vista's problems. It won't be available until late October, yet for a while it topped Amazon's software best-seller list. It still hovers around 25th to 30th — impressive for software that won't be available for months.

Microsoft also revamped its search engine. Now called Bing, it's an impressive piece of work. For the first time, Microsoft has a search site that can rival Google's in terms of technology. And Microsoft's recently announced deal with Yahoo will help the company gain more Web revenue.

So, what happened? Why is Microsoft hitting its stride again?

Microsoft also released a very solid beta of Microsoft Office 2010, and Office will finally be available as a Web-based application. That will likely be enough to fend off Google Apps.

Finally, Microsoft put Apple on the defensive with its aggressive "Laptop Hunters" ads, which play up the price difference between Apple and Windows-based laptops.

So, what happened? Why is Microsoft hitting its stride again?

The primary reason is cultural. Microsoft was always at its best when it believed it was an underdog. Bill Gates was excellent at creating that striver culture, but in his later years, one had the sense that his attention had wandered. And once he left, the company culture was adrift.

Now, for the first time in a long while, Microsoft is, in fact, an underdog. Google has been on top of Internet search and services, Apple has gotten all the buzz for its new products, and Vista has been widely reviled.

Microsoft finally recognized that it couldn't just sit on its pot of cash and its giant market share. If it didn't start releasing solid products and rethinking its Internet strategy, Google could eventually own even the desktop.

In short, Microsoft got its hunger back.

That's not to say that it's perfect. It needs to more aggressively Web-enable its applications and slim down Windows, possibly releasing the operating system as a series of constantly upgraded mix-and-match components. It needs to develop breakthrough products like Apple has.

It's hard to know whether that's possible in the long run. But for now, at least, Microsoft has its mojo back. ■

Preston Gralla *is a contributing editor for* Computerworld.com *and the author of more than 35 books, including* How the Internet Works *(Que, 2006).*

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Career Watch

GET SOCIAL, GET A JOB

THE DISMAL ECONOMY has brought thoughts of the unemployment line to people in nearly every profession, and it has made many of them feel the need to constantly glance over their shoulders, notes Nina Buik, a careers expert and president of the Hewlett-Packard user group Connect. In this type of economic climate, everyone can begin to seem like a potential competitor, and some people will react by burrowing into their cubicles and keeping a low profile.

That's the wrong way to go, maintains Buik. Instead, she advises employees to connect with others both inside and outside of the office by joining a user group and using the tool of social networking. Buik spoke to contributing editor Jamie Eckle.

How can those whose social skills just aren't well developed participate in social networking? It's the same as with any new situation. The easiest way for people to participate in social media venues is to really familiarize themselves with the site they want to utilize. Look and listen to what's going on in the community. What are the conversations people are engaged in, and who are the participants? As they become more comfortable with the site, then it's probably a good time to start participating in other ways, such as adding content, commenting and beginning to cultivate relationships.

What are the best tools currently available? Of course, the most common and broad-based tools are sites such as LinkedIn, Facebook and Twitter, all of which have high membership numbers and can serve to start useful dialogues with company representatives as well as individuals. For a more targeted approach, use sites that can serve as both a support system and resource for your personal brand. There are countless sites out there, so try to find one that caters to your needs and will give you more visibility and insight into your industry. For example, we just launched a social networking site on Connect called myCommunity. It's a place for the members of our organization to come together and post conversations, read blogs specific to HP technology and engage with each other. Another example of a niche social networking site would be something like Advogato, which is a forum for those interested in open-source software development. Additionally, sites such as Wikipedia and Mashable.com offer lists of popular social networking sites with brief descriptions that might be helpful in finding a site that is a good fit for you.

What about user groups? How active does one have to be in a user group for it to be truly beneficial? The great thing about user groups is that members can choose their own level of participation. In my personal experience with Connect, some of our users only participate when they have a question they feel other users might be able to help address, and that's OK because our site is the perfect forum for this type of dialogue. On the other hand, many of our members use the site daily to keep abreast of what's going on in the industry, to foster and grow relationships or to contribute to conversations in the community.

PAGE COMPILED BY JAMIE ECKLE.

Social Networking No-no's

Nina Buik cites the following rules for people using social networking for career purposes.

- **Don't bring up politics or use vulgar or sexually charged language.** You'd think this would be common sense, but it's not, Buik says. Keep it professional. Know what is appropriate to share and what is not. People who use vulgar language, discuss their views on politics or complain about work on networking sites often alienate and send the wrong message to current and even potential employers. "If you want to see an example of how this can go terribly wrong, simply Google the term 'Cisco Fatty,'" she says.

- **Don't talk to strangers!** What your mother told you as a child still holds true as an adult, says Buik. Avoid inviting people to be a contact if you don't know them or haven't engaged in conversation with them before. "It's my general rule not to accept friends unless I've exchanged a business card with them at some point," she says.

- **Avoid split-digital-personality disorder.** Stay consistent across all social media platforms. People often present a different profile on Facebook than they do on LinkedIn or Twitter. Keep in mind, though, that employers, clients and colleagues can easily seek you out on all social media platforms – and with tools such as Pipl.com, this can be done simultaneously. It can seem odd if they find vastly different profiles or levels of professionalism across various online communities.

- **Don't put it all out there.** Your boss and clients don't need to see pictures of you being picked up off a barroom floor. If you are going to have these people as connections on sites such as Facebook, then learn to utilize the privacy/profile settings. You can control who is permitted to view your pictures, wall posts, status updates – essentially everything.

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Shark Tank

TRUE TALES OF IT LIFE AS TOLD TO SHARKY

Eight It Is

Pilot fish is the CIO at a small company with offices in New York and New Jersey. "My one IT person in NYC – who does network admin, desktop support and project management – is out for an extended time due to an illness," fish says. "I asked the CFO if I could bring in a temporary IT person until she returned. His answer was, 'Could you bring in someone for four hours per day instead of eight?' I said, 'Sure. When do you want us to have problems, then, in the morning or afternoon? To which he replied, 'Oh, good point.' "

Priorities

This organization needs an online application to do ticket sales, says the pilot fish who manages the box office. Out goes a bid request; in come bids from three vendors. "A committee evaluated the three vendors," fish reports. "One vendor did not show up for the interview. One vendor showed up in blue jeans and a T-shirt. The last vendor showed up with a staff in suits. Vendor A was rated 0 for its interface with our ticket system. Vendor B was rated 3 for the system interface, and Vendor C was rated a perfect 5 – by everyone but me, the box office manager, who realized that Vendor B *built* our ticket system and would interface with it perfectly but had the temerity to show up in jeans and a T-shirt."

Who Wants to Know?

Programmer pilot fish goes online to a message board for a development system that's used for one of his company's apps, and he runs smack into recently implemented content-blocking. "It presents the message that the site is blocked and tells you to either close, click one link to continue or click a link to see the company's access policy," says fish. "I clicked to continue and finished what I needed to do. But I was curious why this particular site was being blocked. So I went back in and this time clicked on 'Click to learn more about your access policy.' " And the message it gives fish? *Content blocked. Click here to access our Internet resource policy.* Sputters baffled fish, "It actually blocked the policy!"

That IT Touch

It's back in the days of green-screen terminals, and this support pilot fish knows a few special ways to keep them working. "One brand of terminals could often be revived by simply turning them off and back on," says fish. "I taught this trick to the secretary of one large department. One day she called to report a dead terminal. I went to her department, turned the device off and back on, and it came back to life. She said she had done that several times to no avail. I responded, 'Obviously, you didn't do it right.' I was very lucky that she didn't hit me."

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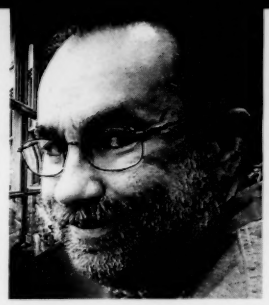
■ OPINION

Steven J. Vaughan-Nichols



Botnets Must Die

DATELINE 2011: Today's Internet report is Green in the European Union, Yellow in North America but still Red in the Pan-Pacific countries and Israel. In the U.S., Facebook and Twitter are still under siege from the Windows-based Katrina Storm botnet. Google, however, reports that search delays are now down to an average of three seconds.

Things have gone from bad to worse in Japan and Reunified Korea, though, as attacks from former North Korean cyberwarfare units using the Windows-based MyDoom VII botnet have locked down all financial and government Web sites. That's still better than Israel, where, according to landline phone reports, attacks from the so-called Sons of Eichmann cyberterrorist group using the Windows botnet New Cyxymu have totally frozen the country's Internet access.

Sound like science fiction? I wish it were. I think it's a fair prediction of where we're going if we don't stop Windows-based botnet distributed denial-of-service attacks.

We've already seen countries like Estonia and Georgia knocked off the Internet by Russia-based hackers using botnets. Google was slowed to a crawl by a similar attack, and South Korean and U.S. business and government Web sites were hammered earlier this year. The early-August attack on Twitter and Facebook, which stopped Twitter in its tracks and brought Facebook to its knees, was only the latest in a series of damaging DDoS attacks.

This is only going to get worse. Windows' insecurity has allowed millions of PCs to turn into soldiers in botnet armies. Most of the time, their controllers are happy to let these systems quietly churn out hundreds of millions of spam e-mails a day. Or, as in the case of the Clampi Trojan, which has infected up to a million Windows PCs, silently steal credit card information.

Now, however, botnets are being used for more than just the criminal activities of social misfits eager to make a quick buck off of naive users. They're being used to attack businesses, countries and, in the case of the attack that busted up the social networks this month, one individual, a pro-Georgia blogger.

■ If we don't fix things now, the Internet of 2011 is going to be one heck of a mess.

Think about that. Every major Western social network was brought to its knees because a small group of people were ticked off at one guy.

We can't let this continue. Catching the botnet masters has proved to be close to impossible. So we're going to have to try another approach.

The only way I can see of doing it is to choke off the botnets. Since all — I repeat *all* — botnets run on poorly secured Windows systems, I think Internet service providers have to either block compromised PCs from getting to the Internet in the first place or force-feed security upgrades into them.

We already know Microsoft can't fix Windows' security problems. Every month brings yet another Patch Tuesday full of fixes for major vulnerabilities, yet Microsoft never catches up with Windows' security holes. It never will. Windows started out without network security, and every fix since Windows for Workgroups has been one patch on top of another, right through to Windows 7.

We also know education won't do the job. Anyone with a higher-than-room-temperature IQ already has security software and keeps up to date with patches. Let's be kind and assume that 90% of the Windows-using population does this. That leaves, what, about 100 million Windows PCs in the world available for botnet deployment?

Yuck! I don't like those odds!

No, the only solution is for ISPs to start checking Windows PCs in at the Internet gate, and if they don't pass a minimum security check, we don't allow them in. If an ISP doesn't join up with this posse, cut it off from the rest of the Internet. This really is a case where if you're not part of the solution, you're part of the problem.

Don't like it? Tough. It's either that or we're all going to get stuck with an Internet that's tied into knots by 2011. ■

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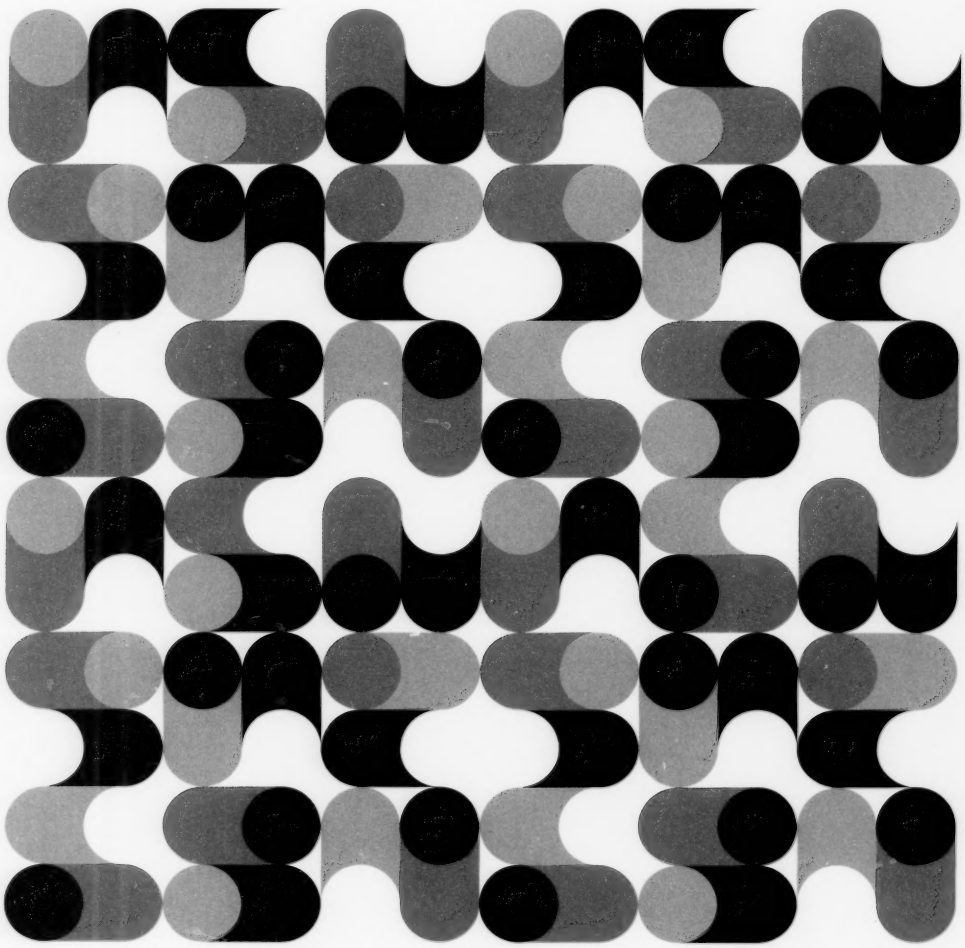
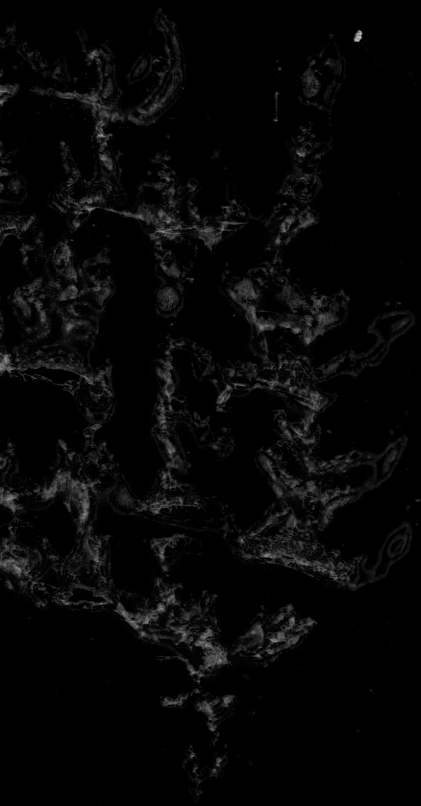
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